

FINANCIAL TIMES

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D 8523 B

U.S. sees a totally new approach to making vehicles, Page 14

NEWS SUMMARY

GENERAL

Ten die in Italian ski lift accident

In the Italian winter sport resort of Champolieu, near Aosta, 10 people were killed and many more injured when a ski-lift broke in high winds.

In a Turin cinema fire, more than 35 were killed and many more injured, police said yesterday evening.

In the south-east Turkish town of Birecik, 20 people were killed in a head-on crash between a bus and a lorry.

Three Dutchmen and one Englishman were killed when their light aircraft, crashed into the IJmeer lake near Amsterdam.

Argentine crisis

Argentine President Reynaldo Bignone faced his most serious crisis since taking power in June, with new unrest in the armed forces, whose chiefs are believed to have drawn up a programme of tough economic and political measures. There also appears to be a bitter clash between the military junta and politicians. Page 16.

Iraqis 'kill' 15,000

Iraq said more than 15,000 Iranians had been killed in fierce battles last week when Iran launched a new offensive. Page 2. Iranian Leftist opposition Mujahedin said that 1,000 political prisoners were executed in one week last month.

Assam destruction

The Assam village Chamaria, was destroyed and several others attacked in Hindu-Muslim conflicts before today's local elections. At least 14 more people were killed, and it is estimated that up to 85 have died this month. Page 2.

Chilean reshuffle

Chile's Finance and Economy Minister Rolf Luderer cut short a European tour for a Cabinet reshuffle, to be announced today.

Thatcher accused

Soviet news agency Tass accused British Prime Minister Margaret Thatcher and the Conservative party of using "the dirtiest methods of Goebbels' propaganda" to spread fear about a "mythical" Soviet military threat.

Sadats sentenced

Egypt's Court of Ethics confirmed a year's detention order on the late President Anwar Sadat's brother, Esmat, and three of his sons, for fraud, corruption, and exploiting the late President's name.

Spa complex blaze

Fire destroyed the two-year-old Taunus-Therme spa complex at Bad Homburg, West Germany, causing DM 50m (\$21m) damage.

Colombian crime war

Colombia is spending about 30m pesos (\$43m) on modernising its police to fight crime and guerrilla activity.

Hinckley suicide bid

John Hinckley, who was found not guilty because of insanity of trying to kill President Ronald Reagan in 1981, was in hospital in Washington after a suicide attempt.

Eta expulsions

Eta's political-military wing expelled 12 hardliners from the Basque separatist organisation.

Briefly...

Queen Elizabeth and Prince Philip left London for Bermuda for a one-month tour that will include Jamaica, the Cayman Islands, and North America.

China saw out the Year of the Dog and welcomed the Year of the Pig with fireworks, theatricals, and feasting. Page 16.

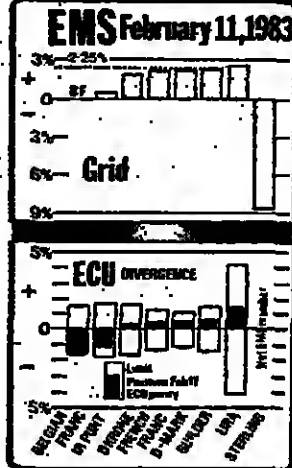
BUSINESS

France's GNP up by 1.5% in 1982

FRANCE'S gross national product grew by 1.5 per cent in 1982, while West Germany's fell by 1.2 per cent. This largely accounts for France's 3.8 per cent increase, in volume terms, of imports during the year. Page 16.

UK BANK profits are likely to be 20 per cent down in 1982 after bad debt provisions doubled to £350m (\$1.3bn), but dividends are likely to go up by more than 10 per cent. Page 6.

EUROPEAN Monetary System's weaker members came under increased pressure last week. The Belgian and French francs required



support from several central banks due mainly to a firmer trend in the West German D-Mark.

The strength of the German unit was to increase hopes of a conservative victory in the forthcoming general election. On Friday the D-Mark was placed above the Danish krone, and only a little below the Dutch guilder, which remained very strong.

The Italian lira was the top currency by virtue of its wider divergence allowance. The Belgian franc was the weakest currency, placed outside its divergence limit.

The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2% per cent. The lower chart gives each currency's divergence from its "financial anchor" against the European Currency Unit (ECU), itself a basket of European currencies.

POLAND'S national income in 1982 was 8 per cent down on 1981's. Page 16.

SWEDEN is the subject of today's special Statistical Trends analysis. Page 3.

EEC will this week start talks on its policy for the coming round of international negotiations on export credit rates and conditions. Page 4.

PORTUGAL is planning a nuclear energy programme by mid-1984.

LLOYD'S, the London insurance market, gives too little information to its members, a report by Financial Intelligence and Research says. Page 6.

COMPANIES

CANADIAN National Railways is having talks with "other parties" which could affect its \$300m (\$49m) investment in Swiss-based Cast Shipping. Page 16.

FOKKER, the Dutch aerospace company, is spending about £1 700m (\$260m) on developing new versions of its F-27 and F-28 twin-engine aircraft. Page 4.

MOTORECANE, the French motor maker, is likely to file for bankruptcy this month after failing to meet payments of FF 20m (\$2.5m) due last Thursday. Page 18.

MASSEY FERGUSON, the troubled Canadian farm machinery maker, has launched a new marketing and sales strategy in the U.S. Page 18.

Japan agrees to restrain VTR exports for EEC

BY CHARLES SMITH IN TOKYO

Four weeks of negotiations between the EEC and Japan ended in success at the weekend when Japan undertook to restrain its exports of video tape recorders and TV tubes to the community market, and to monitor sales of eight other products.

The agreement came during talks between the Japanese Minister of International Trade and Industry, Mr Sadanori Yamazaki, and two EEC Commissioners, Viscount Etienne Davignon and Mr Wilhelm Haferkamp.

It is the first time Japan has agreed to limit exports of any item to the EEC as a whole. Previous restraints on Japanese shipments to Europe have been limited to individual countries.

The agreement to restrain exports to the EEC was one of two important moves made by Japan on the trade front at the weekend. In separate talks with the U.S. Special Trade Representative, Mr William Brock, MITI officials agreed to continue for a third year arrangements, originally introduced in May 1981, under which Japanese passenger car exports to the U.S. have been held below an annual ceiling of 1.68 units.

Saturday's EEC agreement centred on Japan's promise to limit sales of VTRs in Europe for three years with the ceiling on sales for 1983 fixed at 4.5m sets. This figure

includes an estimated 600,000 knock-down kits that will be exported for final assembly at a number of newly established Japanese VTR factories in the UK and West Germany.

Direct exports of finished sets by Japan will probably total slightly under 4m, compared with 1982 of around 4.9m sets, of which Britain took nearly half.

The agreement includes two other significant items - a price clause which will align the ex-stock price of Japanese VTRs shipped to Europe with the ex-factory price of European-made sets, and a guarantee that European manufacturers will be able to sell a minimum of 1.2m sets in the community market.

The guarantee of a minimum production level for EEC makers means, according to one EEC source, that the European industry will be able to achieve the "critical mass" needed to become competitive in world markets for VTRs.

Japan will also limit exports to the community of TV tubes for three years.

There will be joint monitoring by

Japan and the EEC of eight other sensitive export items - cars, motor-cycles, machine tools, light commercial vehicles, quartz watches, fork-lift trucks, TV sets and hi-fi equipment.

In return for Japan's undertaking, the EEC is understood to have guaranteed that the French government will withdraw a ruling introduced in December under which all VTRs imported into France have had to be cleared through the inland customs post of Poitiers.

The agreement to restrain VTR exports was described yesterday by the EEC main negotiator, Viscount Davignon, as a major turning point in Japan-EEC relations.

The UK Government is unlikely to be satisfied with the agreement. The Trade Department will probably pursue the complaint in Gatt against Japan's trading policies even more strenuously.

Britain will probably press for more of the recorders to be made in the UK. This demand is not met by the restraint agreement.

Footholds in Europe, Page 4
Fewer UK jobs, Page 16

Reagan may put forward compromise on missiles

BY REGINALD DALE IN WASHINGTON

PRESIDENT RONALD REAGAN is considering whether to propose an "intermediate way" to achieve his aim of banning all intermediate range nuclear weapons from Europe.

Nobody he had met in Western Europe had argued against the zero option, except on the grounds that the Soviet Union did not like it, Mr Bush said.

The allies had also supported deployment of new American Cruise and Pershing 2 missiles from December, if there was no agreement in Geneva, and the U.S. would not "vacillate or pull away" from the deployment date, Mr Bush said.

West European governments, while supporting the zero option as the ideal solution, have suggested that there might be some kind of interim agreement under which limited numbers would be deployed by both sides. The U.S. has indicated that it will be flexible if Moscow comes up with a serious negotiating offer, but yesterday Mr Bush said

he still did not know what Mr Reagan would decide.

Mr Bush also said that he did not know whether Mr Reagan would run again for the presidency in 1984, although he thought that he should do so. All the signals were that Mr Reagan was planning to run, he said.

Mr Bush said he thought that both the Israelis and the Lebanese now accepted the urgent need for progress in negotiations on the withdrawal of all foreign troops from Lebanon. He would not comment on the details of the latest plan put forward by Mr Philip Habib, Mr Reagan's special Middle East envoy, which is reported to call for a doubling of the multinational peace force currently in Beirut.

He added, however, that the U.S. would do "whatever is necessary" to allow the Israeli, Syrian and Palestinian forces to leave the country.

Soviet arms plan warning, Page 2

Libya and Algeria join attack on Saudi oil price stance

BY ROGER MATTHEWS IN LONDON

LIBYA and Algeria have joined Iran and Venezuela in attacking Saudi Arabia's statement that it will no longer seek to defend the \$34 a barrel reference price for oil set by the Organisation of Petroleum Exporting Countries (Opec).

Libya, which has been undercutting the official price to maintain its export levels, said attempts to bring down prices were aimed at sabotaging the economies and power of Islamic countries.

According to a statement issued in Tripoli, "the plan being prepared by imperialist circles to force producer countries to lower their oil prices is an open conspiracy to undermine the hopes and ambitions of the peoples of those countries."

The statement indicates a further worsening in relations between Libya and Saudi Arabia, which earlier had shown signs of some improvement. Mr Kamel Hassan Maghour, Libya's Oil Minister, arrived in the United Arab Emirates yesterday,

after visiting Saudi Arabia, Kuwait and Qatar.

The Libyans have been calling for an emergency meeting of Opec, but the Gulf states insist there must be a prior understanding on pricing, production and differentials. The Saudi Press Agency has not made any mention of the Libyan minister's tour.

Algerian newspapers yesterday accused Saudi Arabia of trying to push down the price of oil "in contradiction to the wishes of all the other members of Opec."

The official daily paper, El Moudjahid, said Saudi Arabia's "obedience to monopolies" posed a threat to prices, but the only beneficiaries would be the oil multi-nationals.

However, the newspaper believed it unlikely that any of the Gulf countries would dare to undertake "solitary and dangerous initiatives which could set off a price war and cause the collapse of the business world."

Opec finance ministers are due to

meet in Vienna today to discuss future aid for developing countries. The Opec Fund last year made available a record \$485.9m, according to the 1982 report just issued.

However, the report warns: "Such expansion cannot be sustained if the financial position of Opec countries and their ability to give, continues to suffer as a result of lower oil exports and prices."

Mr Ibrahim Shihata, the Fund's director-general, added that it had sufficient resources to ensure cut-backs would not be felt for the next two years. The one-day meeting of finance ministers is scheduled to discuss the fund's capital, together with suggestions for apportioning its aid.

The impact of the decline in oil revenues has been particularly felt in the United Arab Emirates, according to Mr Abdul Hakim al Buzai, the budget director. He warned yesterday that plans were being made for an "austerity budget" with much lower government spending.

Brazil Airbus order in jeopardy

By Andrew Whitley
In Rio de Janeiro

ATTEMPTS BY Brazil's second airline, Vasp, to compel the West European banks financing Airbus Industrie sales to provide additional foreign currency loans to the Brazilian Government are endangering a \$580m deal with the Sao Paulo state airline for nine A-310 wide-bodied aircraft.

The British, French and German banks involved have already agreed to provide 100 per cent financing for the projected sale, which would be a major breakthrough for Airbus Industrie, the European consortium, in Latin America. Government export credits represent 85 per cent of the financing, with the balance coming from commercial loans.

But earlier this month, Vasp told the banks the order was conditional on the provision of an additional Eurocredit loan of \$280m to Infraero, the Federal government agency responsible for the re-equipment of Brazil's airport navigation systems. French companies have won the lion's share of orders placed by Infraero.

The new demand, coming on top of the requirement to participate in Brazil's pending \$4.4bn jumbo loan and to roll over 1983 maturities, has split the Airbus banks, pitting Middle East against the French consortium led by BNP, with the Germans led by Dresdner Bank watching from the sidelines.

Midland, which, as a group, is having to put up approximately \$200m in new money for Brazil this year, considers the question of any parallel financing for Vasp to be "totally inappropriate and unrealistic in the present climate." At its request the formal financing offer made to the airline last week, contains no reference to the Infraero loan.

Airbus Industrie and the French banks, for their part, feel much more strongly about the need to accommodate Brazil if possible, if it would mean finally securing the order. The order was won last April, against strong competition from Boeing, and it is feared that Vasp might revert to the U.S. manufacturer.

France is known to have attempted to link Brazilian orders, notably for the Airbus and airport navigation equipment, to its participation in the Brazilian financial rescue package when it first emerged last December.

However complicating the dispute is the fact that Vasp is by no means sure of winning the necessary state and Federal government approval for the purchase of the nine Airbus aircraft.

Sharon will retain Israeli Cabinet seat

BY DAVID LENNON IN TEL AVIV

GENERAL Ariel Sharon will remain in the Israeli Cabinet as a Minister without portfolio. That was decided at the Cabinet meeting yesterday, after Gen Sharon had returned the Defence Ministry portfolio to Mr Menachem Begin, the Prime Minister.

The decision to keep Gen Sharon in the Cabinet, after the severe criticism of his actions by the Commission of Inquiry into the Beirut massacre, is bound to lead to a stormy session of the Knesset (Parliament) today, when it is asked to approve the switch of portfolios.

The Government is confident that it will win Parliamentary approval for retaining Gen Sharon, who, it says, has thus formally fulfilled the recommendation of the Inquiry Commission by giving up the Defence Ministry.

Mr Begin will serve as Defence Minister for an interim period, as he did between the resignation of Mr Ezer Weizman from this post in 1980 until Gen Sharon's appointment after the 1981 election.

Professor Moshe Arens, the current Israeli Ambassador in Washington, is the premier's first choice to take over Defence. Prof Arens has yet to confirm his acceptance of the post, which he rejected once before because he opposed the Camp

David agreement on peace with Egypt.

In a letter to the Premier yesterday, Gen Sharon wrote: "I will comply with the Cabinet's decision (last Thursday) to transfer the portfolio of Defence," but added: "I have no intention to resign from the Government and I intend to go on and serve as a Minister."

In an editorial yesterday, the Jerusalem Post condemned this manoeuvre. It said Gen Sharon should be dismissed from the Cabinet. "He has been a malign force in the Cabinet, manipulating it to an expanded and disastrous war in Lebanon that the other ministers did not want and could not foresee."

"And he has been a malevolent force on the public stage, deepening by his unbridled rancour and ambition the polarisation that besets the nation. As long as he bears the legitimacy of office, his influence will remain intact," the paper wrote.

Nonetheless, yesterday's developments may defuse the political crisis which has rocked the Government since the publication of the critical report of the Inquiry Commission last week.

But the Government still faces a number of Parliamentary challenges this week. In addition to the

Continued on Page 16

UK sets up secret metals stockpile

BY JOHN EDWARDS IN LONDON

THE UK Government has secretly started buying materials to create a strategic stockpile of key metals and minerals, according to trade sources in London.

Several South African companies have been approached with buying orders for chrome, manganese and other materials, used in the manufacture of armaments and vital to industry.

Initial sums involved are believed to be between £5m to £10m (\$15.4m), but building up a reasonable stockpile would cost a great deal more.

The idea of creating a strategic stockpile of vital raw materials to make Britain less vulnerable to supply shortages, has been debated for some time.

A special report by a House of Lords select committee, last October, cited several metals and minerals, the supply of which is either centred in Communist bloc countries, developing nations or South Africa, the leading producer of chrome, manganese and platinum group metals.

But it is believed that the Falklands War finally persuaded the

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Continued on Page 16

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CONTENTS

International Companies	17, 18	Editorial comment	14
World Trade	4	Eurobonds	17
UK Companies	6, 8	Letters	15
	19	Lex	16
		Lombard	15
Appointments	18, 23	Management	12
Arts - Reviews	13	Men and Matters	28
Business Law	24	Money Markets	28
Construction	11	Statistical Trends	3
Currencies	28	Stock Markets - Bourses	22
		- Wall Street	20-22
		- London	26, 27
		Technical Reports	18
		Weather	16

United States: Japanese move into Tennessee	14	Editorial comment: youth training in UK; IMF	14
Middle East today: harder choices for the PLO	15	Lex: Wall Street and the U.S. markets	16
Japan: manufacturing footholds in Europe	4	Lombard: some good news from the OECD	15
Statistical trends: Sweden	3	IMF: talks amid tension and uncertainty	2

OVERSEAS NEWS

Barbie tells of his 'suffering'

By David Housheer in Paris

KLAUS BARBIE, the former Gestapo leader in Lyons who is to stand trial in France for crimes against humanity, expressed no regrets for his actions in a remarkable interview on French television last night.

Barbie, who has been in France for a week since being deported from Bolivia, described his job during the war as head of the anti-resistance forces in France. "My particular task," he said, "was the war against the French resistance."

Asked about the fate of Jean Moulin, head of the resistance in France, who Barbie is said to have tortured to death, he replied "That was part of the war." The interview was recorded by a Bolivian television team who accompanied Barbie during his flight a week ago from La Paz via French Guyana to Lyons.

At one point in the film, not all of which was shown last night, Barbie says "If Germany had won the war, nobody would have hounded with my case." At another point he draws a comparison with Napoleon saying: "Two hundred years afterwards, he has been made a hero of."

Asked how he judges his life, Barbie said that the "balance sheet is that I have suffered a great deal." He is accused of being responsible directly or indirectly for 14,000 arrests, 4,300 deaths and 7,500 deportations.

Nitze condemns Soviet proposal to limit missiles

BY BRIDGET BLOOM IN MUNICH

IF NATO accepted recent Russian proposals to limit nuclear missiles in Europe the Soviet Union would still have twice as many missiles threatening Western Europe as it had four years ago, according to Mr Paul Nitze, the chief U.S. intermediate arms negotiator in Geneva.

Mr Nitze, who leads the U.S. delegation to the Intermediate Nuclear Force (INF) talks, gave the fullest details so far of the U.S. reaction to the Soviet offer to reduce its SS20 missiles in Europe to the level of the 102 French and British systems when he spoke here at the weekend.

He was attending the two-day Wehrkunde conference.

Mr Nitze, who has so far maintained public silence on the details of his 15-month long negotiations with the Soviet Union, listed four key objections to the Soviet proposals, which were made public by Mr Yuri Andropov, the Soviet Premier, last month.

The Soviet offer would mean that Nato would not be able to deploy any of the 572 cruise and Pershing

missiles. Deployment should begin at the end of this year unless arms negotiations succeed in making deployment unnecessary.

It would leave a large number of Soviet SS20 missiles in European Russia, as well as an unlimited number of such nuclear weapons deployed behind the Urals but still capable of reaching Western Europe.

Finally, it would mean the virtual elimination of U.S. aircraft in Europe which were capable of carrying either nuclear or conventional weapons. This, Mr Nitze said, would severely weaken the U.S. contribution to Nato's conventional deterrence and defence.

Mr Nitze would not be drawn on whether or when he expected the Soviet Union to produce new proposals. The consensus at this conference appeared to be that there was no likelihood of real Soviet concessions for several months and probably not until those missiles which are due first to be deployed in Germany and Britain by the end of the year had begun to arrive.

Troops run refineries in Assam as violence flares

BY K.K. SHARMA IN NEW DELHI

TROOPS TOOK over the running of oil installations in the troubled northeast Indian state of Assam at the weekend to ensure that crude production is not affected by the current spell of violence. More than 80 people had been killed by last night.

The violence, which has led to the closure of two of the three refineries in Assam, is aimed at preventing elections to the state legislature and of 12 members of parliament. The first round of polling, which will last until February 20, will be held today.

The agitation has been launched by students who have for four years been seeking the expulsion of what they call "foreigners," mostly Ben-

gal migrants from Bangladesh and the Indian state of West Bengal.

Violence continued yesterday in Assam for the 13th successive day with more explosions, looting, attempts to blow up bridges and police firing on mobs. Ominously, there were communal killings also for the first time, suggesting that the charged atmosphere in the state caused by the agitation over the elections has sparked off tensions between the Hindus and Muslims.

Assam is a key oil-producing state, yielding more than 5m tonnes of crude a year. Production has been threatened because of strikes by oil workers hence the decision to use troops to keep oil production going.

Tension and uncertainty at IMF talks

BY MAX WILKINSON IN WASHINGTON

AT 11 pm last Thursday, 22 finance ministers dining in Washington's exclusive F Street Club discovered that they had run out of time.

The club had been booked by the International Monetary Fund only until 11, but as the hour approached the countries were still far from agreement on the amount of extra resources which should be provided through increased quota subscriptions.

In a symbolic gesture, one official stopped the clock to give Sir Geoffrey Howe, the UK Chancellor and chairman of the Fund's interim committee, one last chance to bridge the still substantial chasm between the U.S. and most other countries.

Everyone present knew that a deadlock could send waves of anxiety into the international banking system which is now highly dependent on the authority and finances of the IMF in grappling with the problems of huge Third World debts.

By 11.45, the U.S. had dropped its insistence on a total cash ceiling of \$85bn as its total contribution to the strengthening of the IMF's resources. China and Mexico had agreed that more of the increase in quotas than they wished could be used to redistribute the relative quota shares between countries. India had agreed that objections to the majority scheme.

The final result, which was a 47.5 per cent increase in quotas

to SDRs 80bn, was broadly what had been hoped for at the start of the meeting; but the negotiations proved much more tense and uncertain than Sir Geoffrey and his officials had expected when he decided to bring forward the meeting in an effort to hurry the increase through.

The U.S. negotiators who had

Turkey will ask the International Monetary Fund (IMF) to renew for one year its three-year 125m special drawing rights (SDR) standby agreement when it expires in June, writes Metin Munir in Istanbul.

Mr Adnan Ezer Kafaoglu, the Turkish Minister of Finance, revealed this to a group of leading U.S. bankers at a private meeting in New

York last week, according to a Turkish Government official. The Turkish economy has made substantial progress since the standby agreement was concluded in June 1980. Inflation has come down to 25 per cent in 1982 from over 100 per cent in 1980 and, at \$735m, the current deficit is nearly five times smaller than the 1980 figure.

The country's external creditworthiness has improved parallel to this recovery, enabling the Government to re-enter the market for modest sums of mainly project and export related loans.

Mr Kafaoglu's announcement was accompanied by a statement of intent that Turkey would enter the market for a medium-term balance of payments loan of modest proportions this year.

able to the IMF when a special contribution from Saudi Arabia is included.

Even if approval by Congress and by other countries' parliaments goes through by the end of this year—two years ahead of schedule—questions remain, however, as to whether the IMF will have enough money to cope with the huge scale of

ing the enlarged GAB, will only be about \$55bn to \$60bn.

This is small compared with the Organisation for Economic Co-operation and Development's (OECD) estimate that the total Third World debt last year was \$826bn.

Morgan Guaranty, for example, says that Third World indebtedness could rise by \$0

possible debt problems. This year the IMF has about \$15bn of uncommitted funds available. This will be reduced to about \$11bn after agreement with Brazil for its debt rescheduling package, and it is admitted that this will probably not be enough to meet the likely calls for assistance from Latin America and elsewhere.

Borrowing from Saudi Arabia, from other governments, or as a last resort from the money markets, will tide the fund over. But even after the new increases have been ratified the fund's usable resources, includ-

per cent between 1982 and 1986 under "good" assumptions.

Although IMF officials are cautious about giving figures, they concede that the general drift of this analysis is correct. They are generally worried about the possibility that the problems of Latin America, Eastern Europe and the rest of the indebted countries could be added to new calls on the Fund from Western Europe.

On the basis of its existing quota, France alone might ask for as much as \$4.5bn of assistance in a single year. Although

a request from a large developed country would probably be financed through the GAB, this would still be a call on the fund's total resources.

The adequacy of the Fund's resources is closely tied to the major policy question of whether it should dig itself deeper into debt rescheduling packages with extra money, or whether it should be mainly an intermediary.

There is still scope for considerable debate about what the increase in quotas will mean for access to the Fund. At present, individual countries can ask for assistance of up to 450 per cent of their quota. If this rule is unchanged as Third World countries wish, debtor countries could immediately ask for more help, and the Fund's resources would be no better able to match calls upon it.

It has been decided to defer a decision on this theory question. However, it seems likely that the U.S. and other advanced countries which dominate the IMF's executive board will insist that access to the fund should not be allowed to increase by as much as the 47.5 per cent increase in the quotas agreed last week.

A compromise which allows some increase in access in more terms seems likely.

As one official said, the whole lever of the fund's recent approach to the needs of debtor countries has been as low key and as pragmatic as possible.

Heavy casualties in Gulf war

BY ROGER MATTHEWS

IRAQ CLAIMED yesterday to have killed over 15,000 Iranian troops and revolutionary guards since fighting in the Gulf war flared up again a week ago.

About 1,000 Iranian prisoners of war were paraded through the streets of Baghdad on Saturday. Nearly 100 Iranian tanks and 80 armoured personnel carriers were also said to have been destroyed or captured during the battles.

An Iraqi military communiqué also claimed yesterday that its aircraft and naval units had attacked the main Iranian oil terminal at Kharg Island, damaging facilities and a tanker moored at a jetty. There has been no independent verification of the claim.

Iran launched the second stage of its week-long offensive on Thurs-

day opposite Amara in Misan province south east of Baghdad. It appears to have penetrated the first lines of the Iraqi defences but then petered out.

Iraq's military communiques have indicated that it has also been suffering heavy casualties, but no figures have been given.

Dr. Osama el-Bas, a senior aide to President Mubarak of Egypt, said on returning from Baghdad yesterday that Iraq was standing firm against the latest attacks.

"We believe that the situation there is reassuring and the Iraqi front is holding together, politically and morally," he said. "There is hope that the battles raging there are the final battles and the bloodshed will stop."

Egypt has been a major supplier of arms and ammunition to Iraq and there are moves for the two countries to re-establish diplomatic relations which were broken off because of Egypt's peace treaty with Israel.

M Claude Cheysson, the French Foreign Minister, also arrived in Baghdad at the weekend. Iraq has recently concluded new arms supply agreements with France.

M Cheysson was expected to seek clarification on Iraq's capacity to finance existing military and civil contracts.

Despite further assistance from Saudi Arabia, Iraq's financial position has been steadily deteriorating because of the war and its inability to export more than about 600,000 barrels of oil a day.

Italian tax investigation

By James Buxton in Rome

TWO ITALIAN MPs have been warned officially that they are under investigation for involvement in a large-scale tax evasion scandal. Last week, a senior official of the Vatican bank had his passport removed and two priests were arrested in connection with the same affair.

The MPs, a Christian Democrat senator and a Social Democrat deputy, are alleged by Turin magistrates to have secured the promotion of tax officials conniving at a vast racket concerning the evasion of duty on petroleum.

When the scandal first broke in November 1980 implicating politicians, customs men and businessmen, it was said that the state had been defrauded of L2,000bn (\$880m).

Aga Khan is re-elected

By Our Rome Correspondent

PRINCE KARIM, the Aga Khan, is to continue to chair the Consortium Costa Smeralda, which runs the luxury resort on the Sardinian coast.

He and the entire committee of the consortium resigned in nearly January in protest at the Sardinian authorities' refusal to authorise a L1,000bn (\$440m) expansion plan for the resort. The authorities this month approved the plan after 11 years' delay.

The Aga Khan had insisted that he would not return to the consortium, but was re-elected by acclamation.

FINANCIAL TIMES, published daily except Sundays, includes U.S. subscription rates \$420.00 per annum. Second Class postage paid at New York, N.Y., and at additional mailing centres.

British Airways and the 757 go together like Rolls and Royce.



Entering Shuttle service with British Airways – the Boeing 757 powered by Rolls-Royce 535 engines. The most fuel efficient airliner in the world – the 757 is the first Boeing commercial aircraft ever launched with a non-American engine. Rolls-Royce is glad to have won this

opportunity to extend its association with British Airways – its largest commercial customer. Chosen by airlines in Europe and America to power the 757, the 535 combines the latest engine technology with features proved in many years of RB211 airline service in TriStars and Boeing 747s.

This is the kind of advanced engineering which keeps Rolls-Royce in the forefront of technology. Powering commercial and military aircraft world-wide. Pumping oil and gas. Generating electricity. And powering the ships of 25 navies.

**British
airways**



STAYING AHEAD IN THE RACE TO TOMORROW.

ROLLS-ROYCE LIMITED, 65 BUCKINGHAM GATE, LONDON SW1E 6AT.

STATISTICAL TRENDS: SWEDEN

Government bids to boost home demand

Falling industrial output and investment, rising budget deficits and foreign borrowing appear to be pushing Sweden deeper into economic recession. But these statistics do not tell the whole story. The budget figures only cover central government and take no account of local government income or proceeds from pension funds which reduce the deficit considerably. The Social Democratic Government has produced a plan to revive industry.

Elected with a commitment to restore benefits reduced by the previous government, the Social Democrats do not plan cuts in public spending. Indeed, the SKr 91.8bn budget deficit forecast for this year is acceptable, the Government intends to contain unemployment.

At present, the record number of people out of work is equalled by those engaged on direct Government schemes. Other proposed measures are heavy refinancing of some state industries, keeping school leavers in full-time education, and sharing out the available work by increasing short-time work and reducing overtime.

Oil imports appear to have increased slightly in 1982 and the Government will attempt to keep such a large influence on its balance of trade under tight control during the next few years.

The attempt to reduce dependence on oil continues with the intention of having nuclear power provide 50 per cent of electricity by 1990. Although energy conservation is promoted, it is not expected that Sweden will fall from its position as one of the world's highest per capita energy consumers.

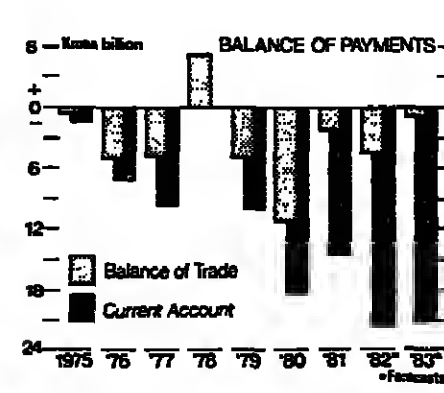
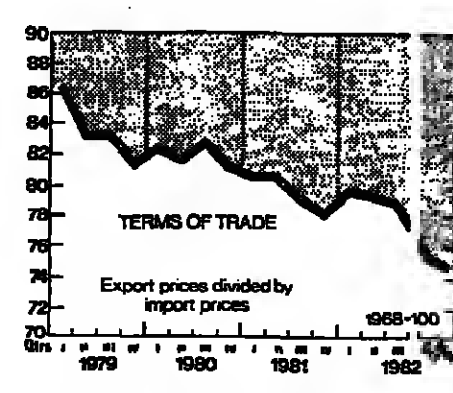
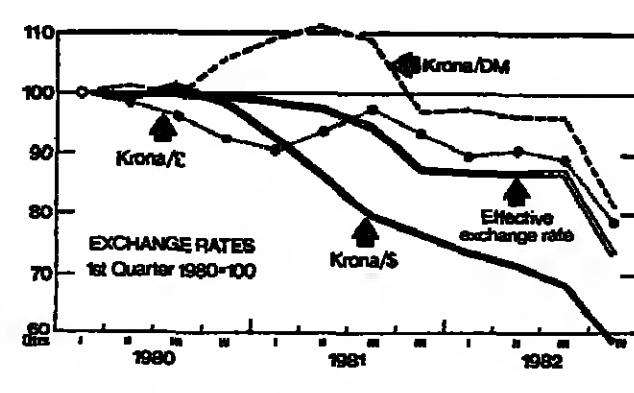
In fact, Sweden is one of the more efficient energy users, its 1981 figure of 0.7 tonnes of oil equivalent per \$1,000 of gross domestic product ranked it 13th among OECD countries.

Commentary by Our Economics Staff; data analysis by Financial Times Statistics Unit; charts and graphics by Financial Times Charts Department.

goods at home and abroad. This is to be achieved through the 16 per cent devaluation of the krona which took place in October last year.

The terms of trade figures show the immediate effect on Swedish competitiveness. The extent that Sweden's problems can be attributed to slack demand for exports is indicated by the fact that her share of world imports fell from 2.27 per cent in 1970 to 1.47 per cent in 1981. With the present low levels of capa-

Economy



FOREIGN DEBT (Public and Private) (in krona)	
1973	14
1974	48
1975	156
1976	227
1977	9,199
1978	11,233
1979	20,272
1980	42,297
1981	51,432
1982	71,000

Source: Sveriges Riksbank

STATE BUDGET BALANCE

	Bn krona	% of GDP
1975	-11	4
1976	-7	2
1977	-18	5
1978	-33	8
1979	-45	10
1980	-52	10
1981	-66	11.5
1982	-77	12.5
1983*	-91.8	14
1984*	-90.2	12.5

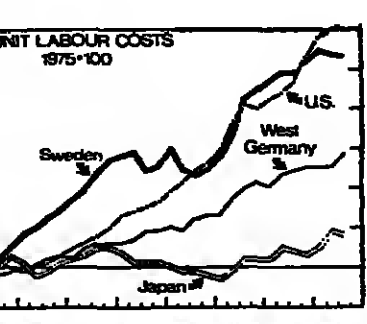
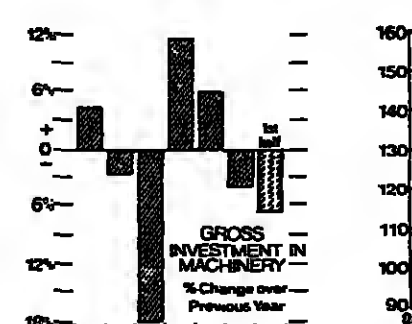
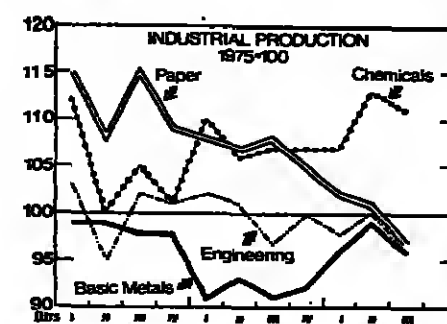
Source: NIER Stockholm

CENTRAL GOVERNMENT EXPENDITURE 1980-81

	% of total
Sweden	45.2
West Germany	48.5
U.S.	34.1
UK	28.0
Italy	27.7
Austria	38.8
Canada	32.8
France	43.9

Source: IMF

Industry



Trade

IRON ORE PRODUCTION

	'000 metric tons
1975	32,639
1976	30,526
1977	25,416
1978	21,486
1979	26,619
1980	27,184
1981	23,225
1982*	15,313

Source: Statistics Sweden

TRADE BY COMMODITIES

	Exports	Imports
1970	24.0	2.2
1980	6.7	1.1
1981	17.3	1.1
1982	3.4	1.3
1983*	0.9	3.9
1984*	4.1	5.4
1985*	14.7	13.9
1986*	25.0	21.6
1987*	14.9	13.8
1988*	13.0	17.6
1989*	6.783	30,892
1990*	7,005	33,434

EXPORTS BY AREA

	% of total
1971	10.3
1981	11.2
1982	9.9
1983	13.5
1984	50.5
1985	6.6
1986	1.5
1987	7.0
1988	4.0
1989	7.46
1990	28.57

ENERGY CONSUMPTION

	(Tonnes oil equivalent per capita)
1973	5.9
1974	4.3
1975	4.0
1976	8.3
1977	3.1
1978	8.6
1979	4.8
1980	0.2
1981	0.3

EMPLOYMENT

	% of total
1970	8.1
1980	0.5
1981	27.6
1982	10.5
1983	0.4
1984	0.9
1985	9.4
1986	14.4
1987	6.9
1988	5.0
1989	27.1
1990	3.854
1991	4,232

TOTAL PRIMARY ENERGY REQUIREMENTS

	% of total
1970	8.1
1980	0.5
1981	27.6
1982	10.5
1983	0.4
1984	0.9
1985	9.4
1986	14.4
1987	6.9
1988	5.0
1989	27.1
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OIL IMPORTS

	Imports m krona	% of GDP	Volume Index 1975=100
1974	3,405	4.5	97.3
1975	4,400	3.8	100.0
1976	5,652	3.8	99.0
1977	4,474	3.8	97.6
1978	7,206	3.2	87.8
1979	10,039	5.0	98.6
1980	17,885	5.3	86.0
1981	19,316	5.2	70.2
1982*	21,846	5.7	72.4

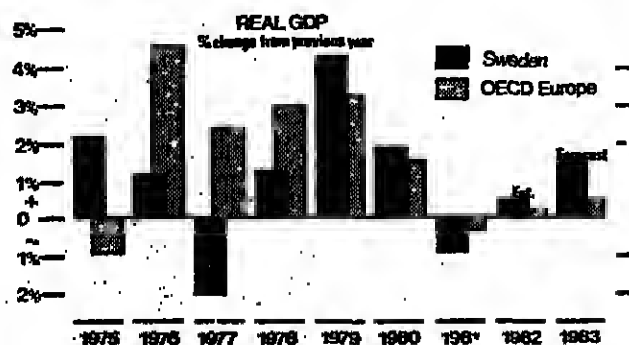
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1990	3.854
1991	4,232

UNEMPLOYED OR EMPLOYED*

	'000s averages per month
1979	87.5
1980	83.7
1981	108.3
1982	133.7
1983	2.1
1984	1.9
1985	2.5
1986	3.1
1987	149.3
1988	121.4
1989	116.4
1990	136.4
1991	3.5
1992	2.8
1993	2.7
1994	3.1

Source: NIER Stockholm



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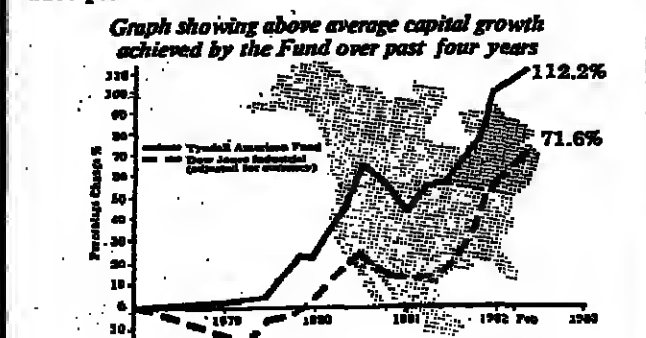
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WORLD TRADE NEWS

Jason Crisp reports on Tokyo's moves to avoid trade friction with Europe

West Europe attracts Japanese investment

THE RECENT flurry of announcements of intended Japanese investments in Europe—particularly Britain and West Germany—were mostly aimed at reducing pressure on Japan to limit its exports to Europe.

Most of the recent announcements of planned Japanese investment in Europe have been for the assembly of and manufacture of video recorders (VTRs) and video tape.

Video equipment has become one of the greatest sources of trade friction between Europe and Japan.

Britain, by far the strongest market in Europe for these products, spent as much on Japanese VTRs last year as it did on Japanese cars. At the weekend Japan and the EEC agreed on limited restrictions of imports of VTRs.

Last month Hitachi-Maxell said it would make video tape in Telford in the UK which will eventually create 200 jobs. Sanyo said it will assemble video recorders at its new tele-

6 Video equipment has become one of the greatest sources of trade friction between Europe and Japan.

vision factory in Lowestoft, creating another 100 jobs. Mitsubishi also said it will assemble VTRs in Scotland. But most Japanese video recorder production appears intended for West Germany. First production began in Berlin at a joint venture

between JVC, Thorn EMI of the UK and AEG-Telefunken of West Germany last year. Sony has also begun producing VTRs in Germany. Next year Hitachi and also Matsushita in a joint venture with Bosch will make VTRs in Germany.

The first Japanese investment in manufacturing in Europe began in the late 1960s and early 1970s in Spain and Wales. The Industry Department's Invest in Britain Bureau says that to date about one half of all Japanese investment in manufacturing in Europe has come to the UK. Most of the substantial investment has been made in colour television plants. The plants were set up in the mid-1970s onwards following strong pressure against Japanese colour TV imports.

The Republic of Ireland has had a reasonable success in attracting Japanese investment, including Fujitsu and NEC. But as one of the major reasons for Japanese investment in Europe is to get round or diminish trade restrictions there is a tendency for it to go to its

6 Britain spent as much on Japanese VTRs last year as it did on Japanese cars.

biggest markets in one of the major economies.

West Germany has recently begun to take a much higher proportion of Japanese investment in Europe. In addition to the VTR plants Toshiba is to make semiconductor and JVC is to make video tape next year.

The most commonly cited attractions of the UK to Japanese companies include: strong welcome from government, English language, financial incentives and strong market for consumer electronics. Main disadvantages are the reputation for poor labour

relations and poor quality of local components. West Germany has the advantage of a larger economy, more stable labour relations, and a good source of local high

quality components. It has been suggested that high German engineering skills and better components is the reason so many of the VTR investments have gone to West Germany.

JAPANESE ELECTRONICS MANUFACTURE IN EUROPE

UK

*1 Sony	colour television and tubes
2 Toshiba	colour television
3 Hitachi (with GEC)	colour television
4 Aivaz	hi-fi
5 Matsushita	colour television
6 Mitsubishi	colour television
7	video recorders from late 1983
8 Sanyo	colour television
9	video recorders from late 1983
10 Hitachi-Maxell	video tape from late 1983

WEST GERMANY

11 Sony	colour television
12 Sony	video recorders
13 J & T (JVC, Thorn, EMI, AEG-Telefunken)	video recorders (1984)
14 Hitachi	video recorders (1984)
15 Matsushita (with Bosch)	semiconductors (1984)
16 Hitachi	semiconductors (1984)
17 Toshiba	semiconductors (1984)
18 Murata-Eric	capacitors
19 JVC	video tape (1984)

FRANCE

20 Alai	hi-fi video recorders
21 Sony	audio cassette tape

BELGIUM

22 Pioneer	car radios/hi-fi
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SPAIN

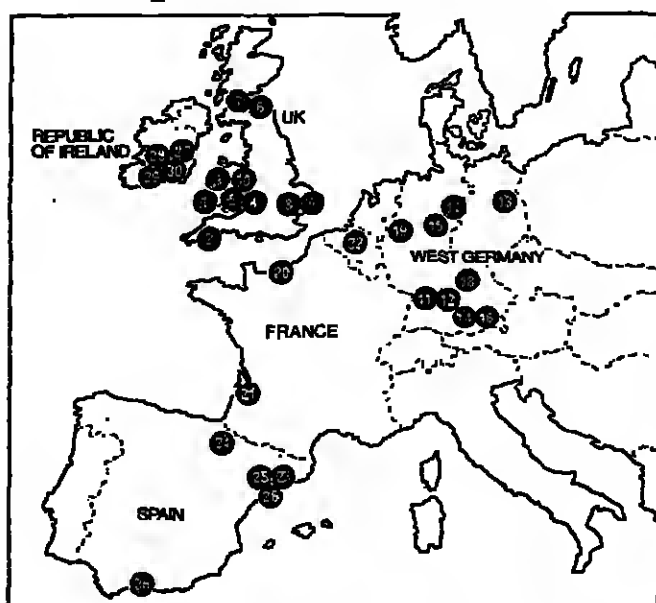
23 Sanyo (with Aznarez)	colour television
24 National Panasonic	colour television
25 Fujitsu	domestic electrical appliances
	computer equipment

REPUBLIC OF IRELAND

27 NEC	semiconductors
28 Sord	microcomputers
29 Logic	microcomputers
30 Fujitsu	semiconductors

*Numbers correspond with map locations
Sources: Invest in Britain Bureau, Macintosh Consultants and Electronic Industries Association of Japan

Japan's Euro-bases



Malaysia and UK to form trade body

By Alain Cass in Kuala Lumpur

A TOP-LEVEL economic and trade association between Britain and Malaysia is being formed with the blessing of the Malaysian Government in a further bid to ease strains between the two countries.

The body - to be known as the Malaysian British Economic Friendship and Trade Association - is likely to be officially launched shortly after Dr Mahathir Mohamed, Malaysia's Premier, meets Mrs Margaret Thatcher, the UK Prime Minister in London later this year.

A counterpart association is to be formed in Britain with the backing of some of the UK's most senior businessmen including Lord Carrington.

Malaysian backers of the scheme include Tunku Datu Ahmad, chief executive of Sime Darby Holdings as well as the heads of Malaysian Tobacco, Chartered Consolidated and ICI (Malaysia).

This new link is seen as vital if trade between Britain and Malaysia is to recover following Dr Mahathir's two-year-old "buy British last" edict.

Businessmen and officials are now quietly optimistic that a turning point in relations has been reached following Dr Mahathir's remarks in an interview last week that he detected a "much more positive attitude" towards Malaysian grievances.

EEC members begin debate on export credits

BY PAUL CHEESERIGHT, WORLD TRADE EDITOR, IN LONDON

EEC MEMBER states this week start the complicated discussions to devise a mandate for the Commission to take to the next round of international negotiations on export credit interest rates and conditions.

The present agreement on interest rates, which involves the OECD nations and is called the consensus, expires in May. The rates range from 10 per cent for the poorest borrowing countries to 12.4 per cent for the richer borrowers.

Exploratory talks on a new agreement start in Paris on March 1, but it is not thought likely that the Commission will have received a negotiating mandate by then.

Officials from the member states start the process of reconciling conflicting positions on the new rates of interest and how they might be changed in the future meetings in Brussels at the end of this week.

The Commission itself is leaning towards advocacy of a reduction in the interest rates of 0.5 of a percentage point, reflecting the general lowering of commercial rates since the last set of international negotiations in summer 1982.

But it is thought that if the U.S. is to agree to changes, it will have to be offered what it has long sought: a mechanism for changing the export credit interest rates so that they stay moderately aligned to commercial rates.

In the UK, the Department of Trade and the Export Credits Guarantee Department are thought to be broadly sympathetic to this view.

It is generally accepted in Whitehall that the payment of a subsidy to bridge the gap between sharply divergent export credit and commercial interest rates should not again be allowed to reach the level of 1981-82. Then it cost £367m (\$592m).

If the subsidy is to be kept under control then it becomes important to make certain that export credit interest rates do not sink too far underneath the level of commercial interest rates.

To realise this, the UK is now prepared to examine a semi-automatic mechanism for changing the export credit rates, a new departure. But the final British position has not been established.

Natali in Cairo talks

BY CHARLES RICHARDS IN CAIRO

SIG LORENZO NATALI, the vice president of the European Commission and Commissioner for Enlargement, is in Cairo to discuss with Egyptian officials the possible repercussions on Egyptian exports to European countries when Spain and Portugal join the Community.

Even with possible cuts in quotas and tariff reductions, the preferential margins Egypt now enjoys over

Spain and Portugal in trade with the Ten will be eroded.

Egypt's exports to the Community last year were worth \$3bn, over 80 per cent in oil and petroleum products.

Egypt also exports onions, garlic, potatoes, citrus fruits and other agricultural produce with between 40 per cent and 8 per cent tariff reduction.

Fokker may develop new version of F-28

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT, IN LONDON

FOKKER of Holland is considering investing up to £170m (\$263m) on the development of new versions of its highly successful F-28 twin-engine jet airliner and F-27 twin-turboprop aircraft.

Mr J. Cornelis, Fokker director for new projects, said in Amsterdam that the company had asked the Dutch government for credits to help with the costs.

The aim is to raise the seating of the F-28 from 85 passengers to 108, which would make it immediately highly competitive with the British Aerospace 148 four-jet regional airliner. Feasibility studies on the programme are due to be completed in July.

The stretched F-28 would use the new Rolls-Royce Tay jet engine, being developed as a successor to the Spey. The aircraft could be avail-

able to 1986-87, at a cost of about \$14m per aircraft. The present version costs about \$11m.

A new version of the F-27 turbo-prop airliner, with new, more fuel-efficient engines, could be on the market by 1986. Both Rolls-Royce, with an improved version of the Dart, and Pratt & Whitney of the U.S., could provide engines for such an aircraft.

Fokker's plans reflect the increasing trend in world aerospace manufacturing to develop derivatives of existing aircraft, rather than go to the expense of developing entirely new types.

Since the F-28 and F-27 have been successful in world markets, the group clearly wishes to exploit that through the 1980s and into the 1990s.

Belgian shipping group 'to take on the Poles'

BY ANDREW FISHER, SHIPPING CORRESPONDENT, IN LONDON

MR TSVI ROSENFELD, head of ABC Containerline of Belgium, said the company was prepared to sacrifice several million dollars in revenues to combat planned Polish competition between the UK and Australia.

"We are poised to take on the Poles," he said in London. "We are willing to sacrifice money in order to win."

The state-run Polish Ocean Lines is bringing on four new Spanish-built roll-on/roll-off vessels to add UK port calls to Southampton to its service from the Continent.

Its service, initially monthly until the fourth of these ships is delivered, starts in mid-March. Total container volume to Australia is around 40,000 TEUs (twenty foot equivalent units) a year, Mr Rosenfeld said.

But this is down on earlier levels, he added, as recession has eroded trade. ABC itself, which operates

below organised conference rates, has revenues of some \$11m on the route and carries around 4,000 TEUs.

Mr Rosenfeld, who said ABC profits fell to \$2m after tax in 1982 from the \$4.5m level of recent years on total revenues of \$100m, asserted he was prepared to sacrifice 30 per cent of revenues on the UK-Australia route, if necessary.

"Let's see after two years," he said. Average revenue per TEU (the industry's basic unit) was \$2,500 on the route against \$3,200 a year ago and \$3,800 two years ago.

Mr Rosenfeld said the profits fall was caused by delays on delivery of two ships from Belgium after the Cockerill yard went bankrupt. This year should see an improvement.

He also announced ABC would enter the North American south-bound trade to Australia and New Zealand.

Dutch in new China row

BY WALTER ELLIS IN AMSTERDAM

GOOD RELATIONS between China and the Netherlands, still suffering from a Dutch decision to construct two submarines for Taiwan in 1981, have come under further strain as the result of a new air service between Amsterdam and Taipei, to start on Wednesday.

The service, to be operated by Martinair, an independent carrier 25 per cent owned by KLM, will be shared with China Airlines of Taiwan.

China has protested to the Dutch Government that the new route indicated recognition of Taiwan by the Netherlands, but the government in The Hague has replied that the venture is entirely commercial and unconnected with diplomacy.

Worse could follow if an announcement by RSV, the ailing Dutch shipbuilder, of possible fur-

ther naval orders from Taipei is confirmed. RSV, like KLM, is part-owned by the Dutch state, and Peking is anxious to ensure that diplomatic recognition of the Taiwan regime is not carried through by covert means under the disguise of trade.

Confidential

Regular windfalls project

The minister concerned has yet to give us a firm indication of his support for this official venture.

Until our future looks clearer, we must obviously postpone any decisions on adopting word processing or any other office system.

Decision day, Thursday! CPT.

Decide on your word processor. Then decide on your future.

MICRO-COMPUTERS.

IT TOOK NCR TO IRON OUT THE MICROBES.



Microbes are those little things that have been bugging micro-computer users for too long.

And it's taken a main-frame computer company with NCR's resources to overcome them.

For the first time, the new Decision Mate V introduces proven NCR patterns of performance to micro-computing.

Ordinarily, micro buyers have to choose between the speed of a 16-bit system or the wide software options of an 8-bit system.

The NCR Decision Mate's dual processor combines both.

Normally, micro buyers run into trouble matching available software to the hardware.

NCR offers five leading software

packages with the Decision Mate V along with a list of packages that have been tested and approved on the hardware.

Usually, micro-computers are limited by their inability to exchange information.

NCR Decision Net allows data to be shared with up to 16 other micros and resources (not just NCR's) through its Modus resource sharer.

As you'd expect from anything that carries the name NCR, the Decision Mate V has an upgradeable storage capacity (from 640Kb to 10Mb).

An expandable memory (from 64Kb RAM up to 512Kb) using plug-in

internal modules. A multi-language capability. A 12-inch high resolution mono/colour VDU. And a local network capability.

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Handwritten note: 20/2/83

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Much of the upheaval was created by the Underground.

A station, twin train tunnels and pedestrian subways all had to be excavated and equipped.

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So did the covered walkways we erected between the Terminals and short term car parks.

Sadly, all was not sweetness and light inside the terminal buildings themselves.

We gave all three major facelifts, reorganising Terminal Two completely.

Try as we might we couldn't help but cause travellers some inconvenience.

We would have done the work outside normal working hours, only Heathrow

normally works 24 hours a day. Still, now the dust has settled the improvements are there for all to see and enjoy.

Probably the most impressive is Eurolounge.

A new Satellite Terminal we have built to ease congestion in Terminals One and Two.

It can accommodate up to 8 widebodied aircraft and up to 1200 widebodied passengers an hour.

It will help us keep pace with the growth in air traffic until Terminal Four is completed.

(Relax, the work isn't affecting the central area of the Airport.)

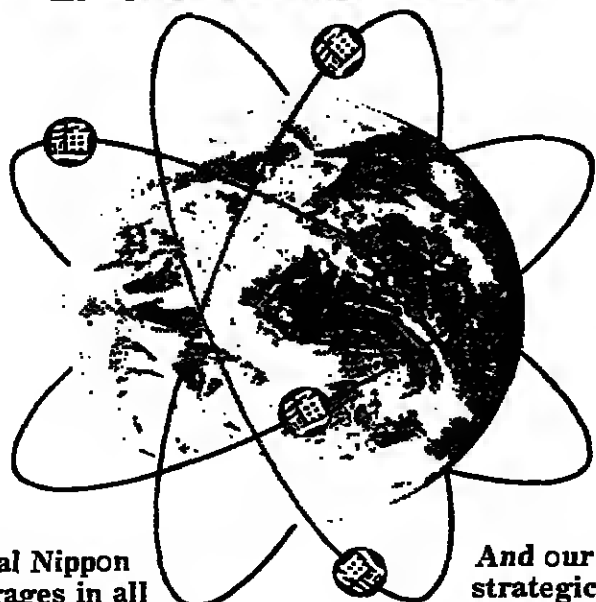
Whether you're a once-a-year flyer or a regular air passenger, take a good look round next time you fly from Heathrow.

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CORRECTED NOTICE

Due to a misprint this advertisement appeared incorrectly in Friday's Financial Times, where the "earnings excluding surplus on realisation of investments — per share" figure and the "dividends declared" figure, for the six months ended 31.12.81, were transposed. The following is correct:

Johannesburg Consolidated Investment Company, Limited

(Incorporated in the Republic of South Africa)

INTERIM REPORT FOR THE SIX MONTHS ENDED 31 DECEMBER, 1982

The following are the unaudited consolidated results of the Company and its subsidiaries:

	Six months ended 31.12.82	Six months ended 31.12.81	Year ended 30.6.82
Profit before taxation	58.4	62.4	109.5
Taxation	6.1	9.0	14.8
Profit after taxation	52.3	53.4	94.7
Outside shareholders' portion of profit (loss)	(0.7)	0.7	0.2
Profit before extraordinary item	53.0	52.7	94.5
Derived from:			
Income from investments	35.3	33.3	64.8
Profits of operating subsidiaries	6.3	13.0	22.8
Surplus on realisation of investments	2.0	—	—
Other net revenue	9.4	6.4	6.9
Preference dividends	4.3	4.1	8.4
Profit attributable to ordinary shareholders before extraordinary item	48.7	48.6	86.1
Extraordinary item	—	—	0.5
Profit attributable to ordinary shareholders after extraordinary item	48.7	48.6	86.6
Ordinary dividends	9.5	9.5	43.8
Retained profit	39.2	39.1	41.8
Net asset value per share (based on market valuations and directors' valuations in respect of unquoted investments)	R189	R140	R103
Number of ordinary shares in issue	7,312,300	7,299,600	7,299,600
Earnings excluding surplus on realisation of investments — per share	R48.75c	R48.65c	R36.14c
Dividends declared	130c	130c	600c

NOTES:
(1) The decrease in attributable profits from the operating subsidiaries arises from a loss incurred by Lennings Limited after providing for certain abnormal items. It is not anticipated that any further write-offs will be required in the current financial year.
(2) In terms of the provisions of the Share Incentive Scheme, as amended, 13,300 ordinary shares were allotted to nominated executives of the Company at the middle market price prevailing on 12th November, 1982.

On behalf of the Board
G. H. WADDELL
F. J. L. WELLS | Directors

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UK NEWS

Bad debt provisions 'to cut bank profits by 20%'

BY WILLIAM HALL, BANKING CORRESPONDENT

BAD DEBT provisions which more than doubled to £250m, are expected to have cut UK bank profits by a fifth in 1982. Even so, the banks are likely to raise their dividends by more than 10 per cent.

Lloyds Bank, the smallest of the Big Four, will be the first of them to announce its results when it reports on Friday. Stockbrokers estimate that its pre-tax profits will range between £320m and £350m, (against £385m) after taking into account bad debt provisions of around £200m (£84m).

Lloyds Bank International, which has been hard hit by the international debt crisis, has already reported sharply lower profits, and

Lloyds & Scottish, the group's finance company, has also reported poor results.

The stock market is awaiting the results of Lloyds Bank with some nervousness given the extent of its exposure to several countries facing financial difficulties. Stockbrokers say that forecasting 1982 profits has been more difficult than ever before given the uncertainty over bad debt provisions and are concentrating on the level of 1982 dividends as a guide to the underlying performance of the banks.

Lloyds Bank, which is forecast to report a drop of 14 per cent in profits, is expected to increase its dividend by 12 per cent. As the first

clearing bank to report, analysts will be watching closely to see whether its payout matches market expectations.

Barclays Bank is expected to increase its dividend by a fifth, NatWest by 10 per cent and Midland Bank by 24 per cent.

Barclays Bank is expected to show the biggest fall in profits (22 per cent), followed by Midland Bank (19 per cent), NatWest (16 per cent) and Lloyds Bank (14 per cent).

In terms of bad debt provisions, Barclays is also expected to lead the group, putting aside £275m, followed by Lloyds (£197m), and NatWest and Midland (£191m).

Lloyd's report attacks 'secrecy'

BY JOHN MOORE, CITY CORRESPONDENT

THE LIMITED amount of disclosure made by Lloyd's underwriting agents to the members of the Lloyd's Insurance Market whose affairs they look after, is condemned in a report published today.

The attack is made in a 256-page survey of the financial status and performance of Lloyd's underwriting agents prepared by financial analysts Financial Intelligence and Research.

The report concludes that "it is difficult to comprehend the reasons for the secrecy of underwriting agents who have declined to dis-

close to their existing or potential underwriting syndicate members gross and net premium levels, outstanding technical reserves, commissions and expenses."

The report stresses that these details "are fundamental to a syndicate member's appreciation of solvency and underwriting performance."

In any event, says the study, such information has to be provided for the underwriters' internal management accounts in order to establish technical reserve levels and underwriting results.

In one of the most outspoken criticisms of Lloyd's business methods the report says: "Lloyd's may consider that its innovative capacity together with credit reputation for prompt payments of risks will ensure that the international market will continue to use its services. However, this will be to no avail if premium capacity does not grow because of a paternalistic attitude towards simply rules of disclosure."

"Lloyd's Underwriting agencies: Financial Status and Performance, Financial Intelligence and Research, 49-51 The Avenue, London, W13

Cruise firing would need UK approval, says Heseltine

BY PETER RIDDELL, POLITICAL EDITOR

AN ABSOLUTE assurance that U.S. cruise missiles could not be launched from the UK without the British Prime Minister's approval was given yesterday by Mr Michael Heseltine, the Defence Secretary.

Senior ministers are now mounting a high profile counter-attack on the unilateral disarmers, in order to regain the political initiative for the Government.

Mrs Margaret Thatcher made the nuclear issue the main theme of her weekend speech to the Young Conservatives' conference in Bournemouth, and even Lord Home, the former Prime Minister, was brought out to attack the unilateralist.

After last Thursday's vote by the Church of England Synod against unilateralism, ministers clearly feel more confident. Some Tory MPs also believe the violence of the demonstration against Mr Heseltine in Newbury last Monday has helped them in the propaganda battle.

The possible siting of cruise missiles in Britain remains a sensitive

issue. An Opinion Research poll for yesterday's Weekend World programme confirmed that a majority of the British public opposed the arrival of cruise in the UK — 47 per cent disapproving against 39 per cent approving.

Moreover, there is a continued lack of confidence in the Reagan Administration's intentions and ability to deal with world problems.

Mr Heseltine argued that Britain could prohibit the U.S. from launching the missiles on its own initiative. He said the two bases for the missiles would be jointly operated by the U.S. and UK, and any use would involve British personnel.

He stressed: "It is not that a British Prime Minister would be put in a position where the weapons could be used without our agreement."

Nevertheless, some Tory MPs believe these assurances will not be sufficient to stem the anti-cruise tide. The poll showed 89 per cent support for joint control. The same poll showed 78 per cent opposition to Britain giving up all nuclear weapons.

William Cook and Sons

A REPORT ABOUT a scheme to reduce capacity in the general steel castings sector in Saturday's Financial Times, incorrectly stated that William Cook and Sons (Sheffield) was among companies trying to set

up a separate scheme for high-volume, machine-moulded casting.

Mr Andrew Cook, managing director, said yesterday the company was not involved in trying to set up a scheme and had no knowledge of any such attempts.



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The coupé on the left is the new BMW 628CSi. From leaving the garage to reaching 60 mph takes a fraction over 8 seconds (assuming you have that kind of driveway). It cruises effortlessly up to a top speed

of 131 mph (assuming you have that much land). If that isn't enough, the 635CSi might be more your speed. It tops 60 in under 7 seconds and carries on comfortably to 142 mph.

However, with a range of around 350 miles and overall consumption figures of 22.5 mpg, both these sumptuous sports coupés are remarkably slow to the petrol pumps.

How much do BMW ask for such a

combination of performance and economy? £18,225 the one. £41,665 the complete set.



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UK NEWS

BAe bid for weapon contract

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BRITISH AEROSPACE's Bracknell Division (formerly Sperry Gyro-scope) has signed a new pact with a group of international companies to bid for work on the terminally-guided warhead of the Multiple Launch Rocket System.

The MLRS is an artillery anti-tank weapon under development in

the U.S. and to be developed for Nato by a wide range of European companies.

The system will have various warheads, for anti-tank, anti-personnel and anti-tank-mine purposes. The final contract could be worth many millions of pounds.

Companies grouping together -

called the General Dynamics Team - to bid for the contract to develop the terminally-guided warhead, include U.S. General Dynamics' Pomona Division (prime contractor); British Aerospace Dynamics Group (Bracknell); Sperry Corporation, U.S.; Dynamit Nobel, West Germany; SEP France; and Scicon, UK.

PRINTING EQUIPMENT MANUFACTURER TRANSFERS PRODUCTION TO GERMANY

Linotype-Paul exports jobs

BY ALAN PIKE, INDUSTRIAL CORRESPONDENT

LINOTYPE-PAUL, the Cheltenham-based printing equipment manufacturer where 500 employees face redundancy, has won several Queen's Awards to Industry for technology and export achievement. The Cheltenham works now ring with grim jokes about the company being in line for a further award - for the permanent export of technology and jobs.

Allied Corporation, Linotype-Paul's U.S. parent company, has decided to stop producing electronic typesetting equipment in the UK and concentrate production at a group company in Germany. The decision has provoked dismay in Cheltenham and angry questions in the Commons.

Management consultants are being engaged in an attempt to find another electronics-based employer interested in taking over the highly-skilled development and production workforce which Linotype-Paul has created in Cheltenham as a ready-assembled team. It is believed that the workers may have several marketable characteristics:

- They have wide experience of modern industrial techniques;
- Cheltenham is in an area of the country favoured by companies with a new technology base;
- The Linotype-Paul plant has an

excellent reputation for industrial relations.

But while these factors may prove attractive to another employer, they serve to increase the bewilderment in Cheltenham about the closure decision. Allied intends to transfer manufacture of electronic typesetting machines to the sister company near Frankfurt by the end of this year, though Linotype-Paul will still employ 400 people in the UK.

The decision has led to the resignation of Mr Derek Kyle, a director whose associations with the company go back to 1956 - long before it was taken over in the late 1960s by the Ultra Corporation's first U.S. owner. Mr Kyle retired as Linotype-Paul's technical director in 1980. He then went to the U.S. to work for the parent company, and has been a Linotype-Paul director since his return.

"Linotype-Paul has an excellent reputation for the development and production of high-technology products," he says. "When I was in the U.S. salesmen thanked Linotype-Paul for enabling them to make their living by developing first-class products which they found they could really sell."

Sales of printing equipment have been hit by the recession. In addition,

many manufacturers are facing relatively slack conditions now that the change in the printing industry from hot metal to electronic composing techniques is well advanced.

These market conditions compelled Allied to close a U.S. factory last year, and at least some of the Cheltenham workers accept that there may be a case for concentrating European production at one location. But they do not believe that the case favours the survival of the West German plant, which they say has experience of running only one product line and only recently started assembling its own printed circuit boards.

In a letter to the British Prime Minister protesting the proposed closure, the employee consultative committee at the non-union company claims that the Allied decision to transfer production to Germany was taken without consulting either the workforce or the local management.

The committee does not regard the 500 workers who face the loss of their jobs as redundant - it maintains that their jobs are being taken from them and placed abroad. The highly-skilled workforce of Linotype-Paul will join the British dole queue while recruitment and training for these same positions is conducted in the U.S. and Germany.

Mr Martin Boothman, Linotype-Paul managing director, says that the decision to transfer production was made only after very detailed analysis. The German choice tied in with research and development factors, and concentration there was considered to give the group the best chance of remaining an important competitor in the electronic typesetting equipment market.

Market projections for the industry showed no significant signs of recovery over the next five years, Mr Boothman said. It was recognised that there was not going to be a return to the boom days of the 1970s.

Staff at Cheltenham are proud of their technological skills. Linotype-Paul, for instance, developed a computerised typesetting system capable of handling the large numbers of characters and symbols in Japanese. This has given the company a high-technology entry point in the Japanese market.

The employee committee has called upon Allied to reconsider its decision to transfer to West Germany. "Meanwhile, we are not on strike and we are not occupying the works," says Mr Mike Keane, committee chairman.

MacGregor likely to be NCB chairman

By John Elliott, Industrial Editor

THE Government hopes to finalise and announce the appointment of Mr Ian MacGregor as chairman of the National Coal Board within the next few days.

After eight days of speculation about Mr MacGregor's appointment, ministers now consider that a firm decision should be made quickly.

The Prime Minister offered him the post informally some time ago, and will be confirmed in a formal offer by Mr Nigel Lawson, Energy Secretary, as soon as Mr MacGregor indicates that he is willing to accept the job, despite the opposition of his wife and family who all live in the U.S.

Mr MacGregor would succeed Mr Norman Siddall, the present chairman, who retires at the end of June.

Ministers would like to announce the name of Mr MacGregor's successor as chairman at the BSC at the same time. But this may not be possible because a firm candidate does not yet appear to have been chosen.

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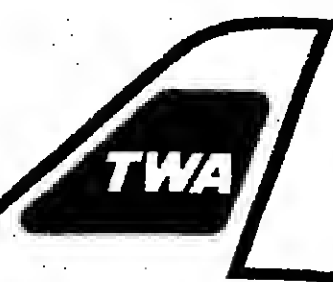
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TECHNOLOGY

SIMULATOR SORTS OUT THE PROBLEMS ON THE L-SAT £160m CONTRACT

British Aerospace tests its satellite creation

BY ALAN CANE

THE FULL extent of the problem became apparent on the video screen within seconds. "The satellite is simply rotating in space now at the mercy of the solar wind," John Pengelly of British Aerospace observed as L-Sat 1, first of the new generation of large communication satellites tipped gently out of its preordained position and floated away, still in orbit with its attitude control mechanisms useless and inoperative.

Fortunately for British Aerospace—and for the European Space Agency which has placed a £160m contract with BAE for the construction of the new pioneering satellite—the loss of L-Sat 1 was a phantom disaster conjured up in a satellite simulator BAE Dynamics Group is developing to test, as best it can, the orbital behaviour of its most advanced creation.

Silicon

BAE is using a comparatively novel computer system to build and test a mathematical model of L-Sat 1 and its massive 27 metre wide solar array, two huge panels of plastic material faced with silicon which will collect the sun's rays and convert them into the electricity which

will power the satellite's communications equipment. These panels are one of the most revolutionary features of L-Sat. Most earlier models were fitted with hinged solar collector panels which were folded close to the satellite during launch and only unfolded once the satellite had reached its geostationary position above the Earth's surface.

The L-Sat "wings" are folded during launch and unfurled when the satellite is in position by twin extending booms. In Earth's gravity, the structure would wallow like a broken kite—no space, the panels set firmly in the solar wind.

That is the heart of the problem. There is simply no way of testing the dynamics of the attitude control system in Earth's gravity.

In space, the attitude of the satellite—the way in which its antennae always point to the right area of the Earth's surface and the solar panels always point towards the Sun—is controlled by three wheels turning continually in the plane of the three principal axes (a fourth wheel set at an angle to the other three is available in case of failure).

The wheels are driven by electric motors. Subtle differences in their speeds keeps the satellite on an even keel. But as the solar panels are so controlled as always to point to the sun, source of the solar wind, the satellite is always pushed in the same direction. The zero momentum system (proper name for the spinning wheels) runs faster and faster until it reaches full speed.

Then it has to be turned off and restarted from scratch. Gas jets are used to hold the satellite steady during this operation. (In the absence of other factors, the amount of gas loaded is the chief determining factor in the life of the satellite. In the early days, they were designed for three years or so—now 10 years is more usual).

But what happens to the satellite during all this? John Pengelly, head of control systems at BAE Dynamics Group says: "You cannot test the satellite and its solar arrays on earth. We use a vibrating table to build up information on the behaviour of certain parts of the structure but the ultimate test is when you have the satellite in orbit and you unfold the array."

Failure to predict accurately satellite behaviour can prove expensive. Customers inevitably ask for large financial penalties to be written into the contract to guarantee performance. "If you do not meet the stipulated performance in orbit, you do not get the money," observes Mr John Hamby, BAE spokesman.

Credibility

On a large contract like L-Sat, the cash penalties could be severe, so BAE has an obvious interest in the accuracy of its flight simulations.

Its credibility as a manufacturer of big satellites would also be at risk—and the market for all sorts of satellites over the next few years looks both lucrative and cut-throat.

Hughes Aircraft is the market leader with, most probably, more satellites in orbit than its competitors put together. Then there is Eurosatellite (Messerschmitt, ATN, Aerospace and Thomson-CSF), Satcom International (Matra, BAE), RCA, Ford and General Electric Company of the U.S.

With the value of the market estimated at \$5bn between now and the year 2000, and little to choose between the offerings of the major manufacturers, marketing will be crucial. So an awful lot is hanging on the success of L-Sat, the largest and most powerful satellite ever launched.

With so much at stake, BAE have taken a novel approach to their mathematical simulation.

The company already has a galaxy of ICL and IBM mainframes which it uses among other things for mathematical simulation and computer aided design. "But the mathematical modelling was not being carried out in real time," Mr Pengelly said. "We could have programmed the mainframes to run the simulation but it would have taken a huge chunk of the capacity—perhaps all of it."

So the problem was to find a way of making up to 12m float-

ing point arithmetic calculations a second—preferably without spending say, \$10m on a super-computer like the Cray 1.

The answer was a U.S. mini-computer, a PDP 11/44 coupled to a special kind of computer dedicated entirely to the performance of floating point arithmetic (computers find it easier to store and manipulate floating point numbers—an example is 1.123 X 10⁴ rather than 1123).

The computer, one of the smallest of a family of machines made by a U.S. company, Floating Point Systems, is in fact, an array processor, designed to handle calculations on the large data arrays found in engineering and research applications. It cost about £40,000, which as John Pengelly pointed out, proved a very cost effective way of solving the problem.

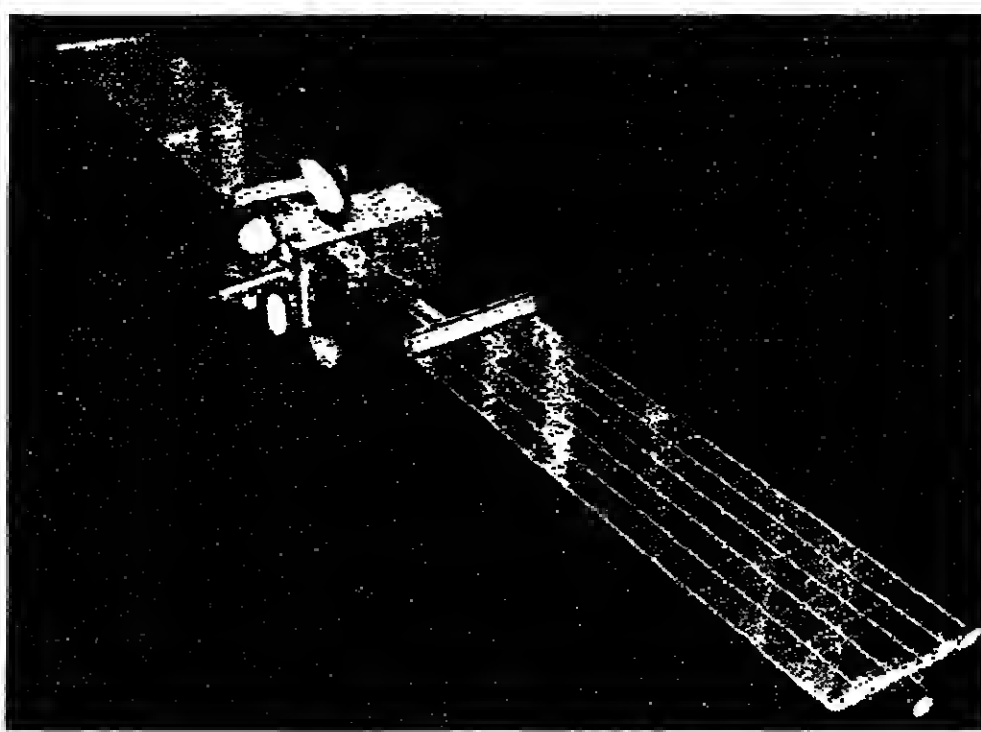
Mr Jack Kampmeier, leading the software team on the simulation project, said the group would have had to use

an analogue computer or buy an expensive number-cruncher if the Floating Point Systems machine had not been available. "We use a software package called Toast, which is really an optimising Fortran compiler," Fortran is a favourite scientific programming language.

BAE has several FPS machines carrying out a variety of tasks including aircraft, weapon and display calculations, including a twin dome air combat simulation (Space Invaders writ very large).

The test rig for L-Sat 1 is already under construction at BAE, near Stevenage, three years before the proposed launch date.

But even with all the hundreds of millions of floating point calculations that will be carried out on the simulator before then, the designers will only know the quality of their handiwork when L-Sat 1 experiences its first perturbation in orbit.



An artist's impression of L-Sat, the European large satellite, for which British Aerospace is prime contractor. This European Space Agency project is due for launch in 1986. At launch it will weigh approximately 2,300 kg and will carry an array of solar cells that will generate over 3,500 watts of power. L-Sat will be capable of national, regional or continental direct broadcast TV, and, for businesses, high speed data, video-phone, video conferencing, computer-to-computer high quality facsimile and slow scan TV.

EDITED BY ALAN CANE

WELDING

Electron beam equipment

A NEW high-voltage electron beam welder, with full microprocessor control and a specially-designed electron gun, is announced by Westgate Engineers.

The new welder offers a 150kV maximum accelerating voltage with an initial 6.0 kW maximum beam power. Both the parameters set and the actual parameters during welding are displayed on a VDU and a permanent record of each weld can be obtained by using the optional high-speed analogue recorder. The equipment also features a flexible vacuum control system, a very fast response time and storage of up to 10 welding programmes. More from Westgate at the Industrial Estate, St Ives, Enoth. (tel: 0450 63594).

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Quiteron device the latest from IBM laboratories

THE LATEST piece of research to come out of the laboratories of IBM is a device called the quiteron. This can perform the same function as a conventional transistor but at temperatures near absolute zero (that is near -273C).

At such temperatures conventional silicon transistors cannot operate but the quiteron, as the new IBM device has been dubbed by its inventor, makes use of the superconducting properties of some materials at these very low temperatures.

For its operation the quiteron, with the more familiar Josephson junction devices, make use of the fact that some metals lost all resistance to the flow of electricity near -273C.

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to cover ranges from 0 degrees C to 2,000 degrees C, without the need for contact with the subject.

Moving materials such as continuous casting, steel plate, paper, fluids and foods are said to be among the many applications for this high-speed and high-response instrument. Prices start below \$1,000. More information from: Terry Egan, Unity Power Systems, Legion House, Godstone Road, Kenley, Surrey (tel: 01-663 8251).

Readings

Temperature probe

THE C-500 infrared temperature probe plugs into a standard digital multimeter to give temperature readings to a sensitivity of 1 deg. F. Since measurements are made by a non-contact technique, they are precise and even moving fluid and live electrical components can be checked. The device is powered by a 9v alkaline battery. Details: Terry Egan at Unity Power Systems, Legion House, Godstone Road, Kenley, Surrey (01-663 8251).



A British Aerospace technician puts the finishing touches to the horn antennae of a satellite

FT

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BUILDING AND CIVIL ENGINEERING

DANGEROUS HOMES

Pre-fab investigation starts

GOVERNMENT revelations of serious defects in a range of reinforced concrete homes represent a further setback for the reputation of prefabricated housing in the UK.

The discovery of faults in Orlit houses in Scotland, announced by Mr John Stanley, Minister of Housing and Construction, has sparked off a nationwide investigation which could affect up to 150,000 homes incorporating structural reinforced concrete.

The Building Research Establishment, in co-operation with selected local authorities, will now be conducting an examination of similar housing, of which there are 30 types.

The move was accompanied by warnings from MPs that the problems could represent "the tip of the iceberg" and the disclosures again highlight the embarrassing and expensive legacy left behind by earlier prefabricated housing programmes. Most reinforced concrete homes were built between the war and in the 1940s and 1950s and were originally designed to provide short-term accommodation.

The deterioration—confirmed in the case of Orlit and

reported in others—results from carbonisation and the use of chlorides in reinforced concrete structures.

Carbonisation, defined by the Department of the Environment as the chemical change in concrete from alkali to acid, destroys the protection which the alkalinity of concrete normally provides for embedded steel reinforcement. The steel is then able to corrode and expand, cracking and spalling the concrete component.

Chlorides, if present in concrete in high concentrations, will corrode the steel directly. Before this was known, says the DoE, calcium chloride was deliberately introduced as an agent to speed the setting of the concrete.

The DoE emphasised that the problem with Orlit (9,000 were built in England and Wales, and another 6,000 in Scotland—mostly between 1946 and 1955) was not so serious as with Airey homes, in which major faults have already been found.

Airey, said the DoE, involved a more fragile construction than the Orlit design, in which columns were much thicker and embedded in the foundations. Neither was steel in Airey

homes protected at the joints and it was, therefore, subject to corrosion at the joints. In the end, the government stipulated that in the case of Airey homes bought before September 7 last year, the buyer was entitled to sell it back to the local council at cost.

With Orlit and other types—Unity, Cornish Unit and Boot—were among those mentioned. Mr Stanley is warning prospective purchasers to "pay particular attention to the condition and durability of the structure before proceeding with the purchase."

The BRE, along with selected local authorities, will be building up a data bank to provide technical information and guidance in this sector of the house market.

Further than that, the DoE thinks that in most cases the deterioration now being revealed can be remedied—by the replacement of concrete panels, for example.

With Airey homes there was some danger of houses collapsing. In this case, goes the prognosis, the danger is of columns cracking, subsidence of the structure and pools of rain-water forming on the roof.

£20m observatory takes shape on edge of extinct volcano

CONSTRUCTION WORK on what promises to be one of the world's best-equipped observatories is now well under way on the rim of an extinct volcano in the Canary Islands.

The £20m project to house the telescope for the new international observatory on La Palma is the result of a programme of co-operation and financial support between the British, Spanish, Swedish, Danish and Dutch governments.

The complex, which will rival any astronomical facilities in the world, is due to be fully operational in 1986 and will be used by visiting astronomers from all over the world. There are already several other telescopes on the island.

The remote site for the observatory, situated 9,000 feet up the volcano, La Caldera de Taburiente, was picked by the Royal Greenwich Observatory for its exceptionally fine weather record.

The best

Prof. Alec Boksenberg, director of the Royal Greenwich, says that while Britain has "quite superb" astronomers it has been lacking in adequate optical facilities. According to Prof. Boksenberg: "La Palma will be the best in the world if I have anything to do with it, and I have."

The preliminary investigations of the area revealed the ground conditions to be largely volcanic but with some compressible clay strata. The contractor, Huarte y Cia, has sunk 83 x 300 mm diameter end-bearing piles to a depth of 20 metres to the basalt layer to support the massive reinforced concrete foundations designed for the new 4.2 metre diameter reflecting telescope.

Instrument

This instrument is now being built by Howard Grubb Parsons, Newcastle upon Tyne, and will be one of the largest of its kind operating outside the U.S. and USSR.

The designers for the buildings are Freeman Fox of London, and their involvement with the observatory stretches back almost ten years, when they were invited by the Science Research Engineering Council to assist them in selecting a

suitable site and planning the layout of the facilities.

In addition to constructing the reinforced concrete buildings with block infill the contractors have been responsible for the associated services such as power supplies, lighting and air conditioning, roadworks and standby generator buildings.

Vital access

As the host country, the Spanish organisation ECONA constructed the vital access road about 50 km through the mountains from the port Santa Cruz de la Palma, so that the continuity of plant, equipment and materials supplies was maintained to the project.

Later this spring the building to house the Isaac Newton 2.5 metre reflecting telescope will be commissioned. This instrument was formerly used by the Royal Greenwich at Herstmonceux and has undergone modifications, by Grubb Parsons, to suit the different latitude of the new observatory.

The Mechanical and Electrical contribution represents a substantial part of the project in terms of both design and capital expenditure, and its complexity requires a strict preventative maintenance plan to ensure effective operation. Breakdowns during viewing time would be extremely costly in programme and labour.

Special treatment

The extremes of temperature and humidity in the area have required special treatments of the exterior and interior of the buildings to control the solar heat gain. Outside the buildings are clad in steel panels and fixed with a 1 metre air gap to aid the cooling process.

Extensive room insulation provides a passive system to resist and delay heat transfer. The Coude Laboratories into which the telescope light beam is projected for analysis and measurement, must be maintained within a 0.5 deg C variation in a 24-hour period and air moisture content must be at a low level to prevent condensation occurring on the mirrors, lenses or within the high precision measuring instruments.

JEAN BENNETT

SAFETY

Non-slip ladder achieves wide industry approval

A SAFETY system which, it is claimed, makes falling off a ladder almost impossible, is slowly winning acceptance by Britain's professional ladder users.

The Smith Ladder Limpit, invented by a former window cleaner Mr David Smith, is now being used by the building departments of more than 100 local authorities since it was launched last March.

In Glasgow, where the local authority bought 20 Limpit kits at a cost of £8,000, Mr Smith believes the resulting savings could be around £1m a year.

With the Limpit, jobs such as replacing guttering on Glasgow tenement buildings can be done with a ladder without a man having to hold the bottom. Normally such a job would require the erection of scaffolding.

Since March last year Mr Smith's company in Dundee has sold £400,000-worth of Limpit equipment in Britain and also in Japan, South Africa, Belgium, France, Australia and the U.S. The basic industrial Limpit costs just under £100.

Based on the simple fulcrum principle, the ladder Limpit consists of an extending tube with tyre wheels which is attached to the end of a ladder.

"We guarantee that properly used the ladder cannot fall, and the man cannot fall off it," says Mr Smith whose prototype consisted of an old piece of gas pipe and pram wheels.

The building and construction industry has been slow to take up the device. The reason, Mr Smith believes, is partly because of recession and partly because they have not realised the potential savings involved. One exception has been Tarmac, which has recommended it to sub-contractors.

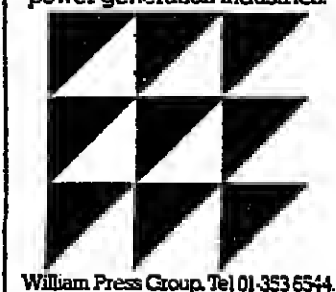
During the year the Health and Safety Executive decided that a ladder fitted with a Limpit may be accepted as being securely fixed as required by construction industry regulations.

This means, Mr Smith says, that the man holding the bottom of the ladder can go off and do something more productive.

At least one insurance company, Phoenix Assurance, has given discounts of around 15 per cent on employers' liability premiums for Limpits used in window cleaning.

Mr Richard Graham Yool, a

Engineering contractors to the oil, gas, chemical, process and power generation industries.



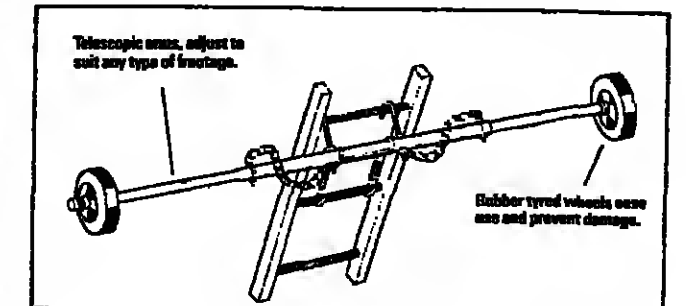
William Press Group. Tel 01-353 6544.

director of insurance brokers Graham Fuller Associates, who negotiated the discount, said he hopes the discount will be extended to other uses and other insurance companies.

Mr James Tye, director general of the British Safety Council, who weighs in stone, is convinced of the stability of the system. "I climbed up and was amazed at the way the ladder stuck to the wall," said Mr Tye, who has recommended its use at the 85,000 premises covered by British Safety Council membership.

"As the Limpit is now available it is in my view unnecessary for ladder users to be at risk anywhere in Great Britain," Mr Tye added.

RAYMOND SNODDY



Warranty scheme makes impact

THERE ARE now local authorities requiring a builder to be a member of the Federation of Master Builders' warranty scheme as a contract condition for home improvement grant work.

This has led the Registration Board of the National Register of Warranted Builders to recommend that the scheme, launched in October 1980, be opened up to enable any builder to register provided the strict entrance criteria are observed.

The upper limit for work under the warranty scheme has been increased to £30,000, with the special arrangements for work above that amount continuing.

Following discussions at the Federation of Master Builders national council meeting last month, and with the general approval of the Office of Fair Trading, the Registration Board has agreed to extend publicity to bring the scheme to the notice of the public.

Among other improvements, the Registration Board is giving serious consideration to the possibility of increasing the warranty period from two to three years.

Mr Charles Fisk, chairman of the Board, said that the scheme

was now poised, following clearance with the Office of Fair Trading, to widen its influence, with the object of benefiting the customer and improving the image of the contractor.

TONY FRANCE

Punish unsafe builders

"COWBOY" FIRMS which ignore health and safety regulations and undermine the construction industry's safety record should be heavily fined according to Mr Malcolm Fordy, president of the National Federation of Building Trades Employers.

Mr Fordy, speaking at the launch of a year-long safety campaign—Site Safe 83—said that "only by imposing heavy financial penalties will companies which are outside the Federation's control, be brought

into line." He urged the Health and Safety Executive to take action against "cowboy" firms which, by ignoring safety regulations, were able to undercut the tenders of bona fide construction companies.

"In the interest of construction employees and of the industry as a whole we are asking the Health and Safety Executive to make sure that their own regulations are strictly enforced," Mr Fordy added.

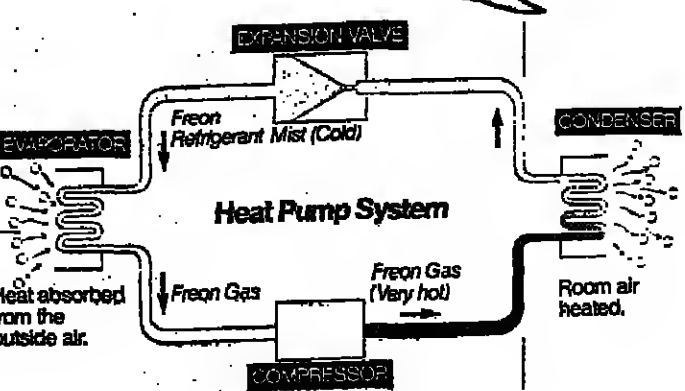
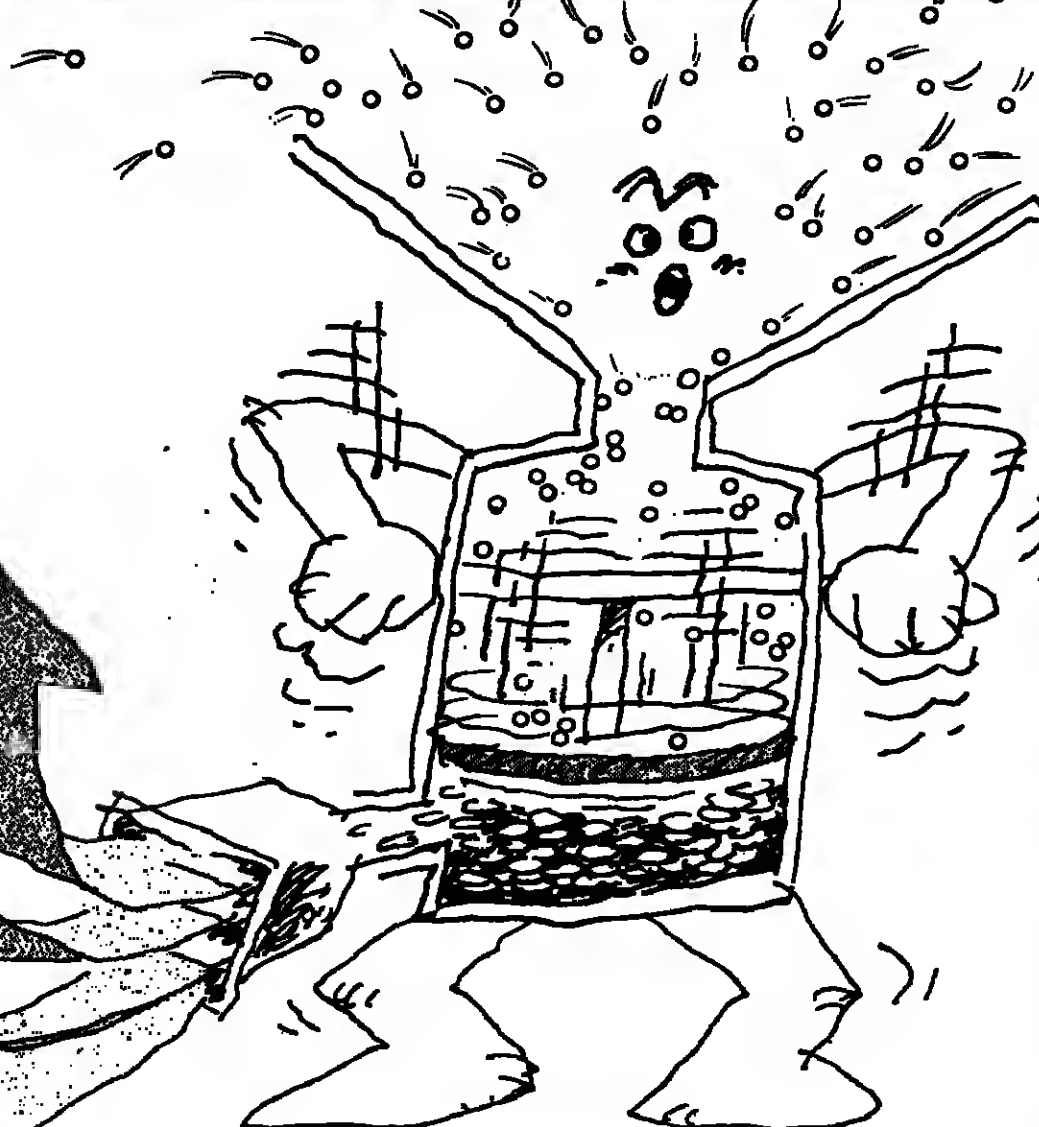
Squeezing heat from thin air

Constantly improving a hot idea.

Because of skyrocketing energy costs, the world is facing a need for conservation. This problem has been compounded by an increase in home heating requirements. The innovative technology of the Hitachi-built heat pump has been providing part of the solution for over 20 years.

A heat pump works on the basic principle that a gas when compressed generates heat. The heat pump system absorbs the "heat" from the outside air. Incredibly enough, for use within the heat pump, there is "heat" in the outside air even when temperatures go as low as -7°C. The system figuratively squeezes heat out of thin air. As remarkable as it may seem, a heat pump system is also capable of running in reverse, creating cool air for air conditioning.

Heat pumps have become an increasingly important form of home heating because their high efficiency conserves energy. Heat pumps can draw



approximately three or more times the heat than the electricity they consume. Heat pumps operate without fire or exhaust gas, resulting in safe operation. Because the same heat pump works as both a heating and cooling device, substantial space savings can be realized.

The mark of a corporation's true commitment to high technology is its

drive not only to provide new products, but its desire to consistently enhance existing ones as well. Ever since Hitachi first commercially introduced their heat pumps in 1963, there have been constant improvements due to their intensive research efforts. Hitachi's over 50 years' experience in heat exchange technology has made available numerous improvements to their original heat pump. State of the art innovations such as the Hitachi High Efficiency Fin (HHEF) and Thermexcel have succeeded in making an already energy efficient source, even more of a power miser.

Hitachi is proud of its energy efficient heat pumps. It is but a small part of the total Hitachi commitment to improving people's lives through technology.

Hitachi offers a wide-ranging product mix—from power generation and transmission equipment, including nuclear power plants, to rolling stock, home appliances, computers, communications equipment, and electronics products.

Throughout its more than 70-year history, Hitachi, Ltd. has consistently believed that research and development is the true base for the growth of a company. To implement this philosophy, Hitachi maintains six research laboratories, which are

engaged in R&D programs covering a wide range of fields.

The same technological innovation used to build energy efficient heat pumps goes into every product Hitachi makes. Taken as a whole, Hitachi's more than 20,000 products constitute a total technological system which meets a wide variety of human and social needs. Hitachi has a lot of hot ideas.

Hitachi High Efficiency Fin (HHEF)

The Hitachi High Efficiency Fin (HHEF) is a heat transfer element that has been developed to improve heat transfer performance. HHEF sets many small, upwardly-convex lower strips against the air stream. These convex lower strips prevent the development of a boundary layer flow in the air stream, and can promote the mixing of such a flow with the free stream.

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THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

DR CARL PINFOLD is well aware that the initial letters of his new company, Merseyside Acoustic Developments, spell out the word MAD. Indeed, he chose the name with great care: who, but someone who knew what he was doing, would dream up such an acronym.

Nevertheless, many may feel that it is apt. For, over the past four years, Pinfold has been developing a new type of hi-fi loudspeaker. It has been patented for him by his employer, Liverpool University, acting as agent, and has just gone into production in MAD's one-room factory at the Merseyside Innovation Centre.

But if it seems mad to try to break into a tough, established market with a revolutionary product, it could be seen as equally unwise for Pinfold to do so on the brink of retirement from his job as the university's senior lecturer in architecture. At 63 he must be one of the oldest of Britain's new entrepreneurs.

He does not need to make a living so why, as people keep asking him, is he going into the stressful and demanding world of company creation—and risking in the venture the retirement lump sum he will get from the university pension fund?

He answers: "Reluctantly, I came to the conclusion that if this thing was to see the light of day, I had no choice but to try to produce it myself. I have tried to sell the invention to the big manufacturers, but they don't want it."

He did actually have an offer from one large maker of loudspeakers, but it was derisory. His suspicion is that the manufacturer wanted to buy Pinfold's concept to suppress it. "They are looking up for volume production of something different and they want to keep things that way," he says.

What Pinfold has done has been to design a small loudspeaker with a single drive unit that covers what he believes is enough of the frequency range to satisfy most requirements. It will not appeal to anyone who wants to shake the house or neighbourhood with heavy rock music. But most people use only between one half and two watts of power per loudspeaker, even though each may have been designed with multi-drive units to cover the entire audible frequency range.

The quality and clarity of Pinfold's speakers are startling when first heard and sound can fill the room without making reasonable normal conversation impossible. He says their qualities become even more apparent when four of them are used in a quadrophonic system.

Pinfold became interested in high-fidelity sound reproduction



Betty and Carl Pinfold: both mad about acoustics

Gambling a pension on a hi-fi invention

Ian Hamilton Fazey explains why an academic is becoming an entrepreneur

because of research and teaching in environmental science and acoustics. He needed to be able to record a wide range of traffic noise and reproduce it accurately so that new designs of windows could be tested for sound-proofing under laboratory conditions.

Thus his loudspeakers had to deliver the true sound, at the right volume, of say, traffic on a major road 100 feet away, or a motorway a quarter of a mile off, or a juggernaut rumbling through a village in Kent. Nothing he could buy produced a satisfactory degree of control.

His design, which understands why he does not disclose too much about, uses a plastic laminate for a diaphragm, which itself is a major innovation. Instead of a conventional trumpet-like cone with a circular cross-section, Pinfold's diaphragm is a flat disc shape in one design, a flat square-TV-screen shape in another.

He admits that there have been two high-quality single

drive unit speakers marketed previously by Jordan and Lowther, two hi-fi manufacturers, but says that even the latter of them is an expensive 25-year-old design requiring large boxes to house it and which has appealed only to enthusiasts.

Pinfold's speakers need only small boxes made not of laminates or chipboard, which usually resonate, but "dead" material—Italian ceramic tiles lined with cork.

The new speakers go on the market next month in a deliberately slow build-up of production and sales, using the hi-fi press to reach enthusiasts first. Pinfold hopes the good news will spread by word of mouth.

The build-up is cautious to ensure smooth transition from prototype to pre-production model and all the work is being done by Pinfold himself, together with a young employee taken from the long Liverpool dole queue, and Pinfold's partner, his wife Betty, who retired last year from her job as an architect

designing schools for Cheshire County Council.

As production expands, the Pinfolds intend to take on more young unemployed people; indeed, another major reason for setting up was to create work on Merseyside.

Start-up funds came from £6,000 borrowed from their bank; Pinfold's retirement lump sum will cover most of it if anything goes wrong. Betty Pinfold says: "We have had to use much of the money on components because no one gives you credit until you are established, but it's quite sufficient to get going."

Merseyside County Council's economic development office is also putting up £8,000 in grants and loans, to be paid as MAD starts to prove itself. There was an opportunity to achieve faster take-off with backing from an investment institution. But Pinfold, who advertises his personal convictions with a CND badge pinned half-way down his lapel and directly over his heart, says: "As far as I was concerned he was the unacceptable face of capitalism. He first annoyed me by taking over someone else's desk and office in the innovation centre as though he owned the place and then treating me like a school-boy."

Then he wanted us to spend money and thousands on market research, to hire salesmen and go quickly into a much bigger rate of expansion than we intended. On top of that he wanted quite a big share in return for doing very little. I told him what to do with his money."

Pinfold says a pair of his speakers will cost no more than £300 a pair (though he would like to be able to sell at about £250) which, he believes, will generate good sales among hi-fi enthusiasts. His first-year production target is up to 20 pairs of speakers a month and wants to be able to take £10,000 out of the business for himself and his wife.

Longer term, he would like to sell out, not because he doesn't find the venture exciting "but I'm only doing this to get my speakers on to the market and create jobs. When I sell out it will be on condition that any production takes place on Merseyside. Then I can get on with more ideas for MAD."

These include a demountable temporary concert hall that can be erected inside any large building. A major orchestra is to try out a prototype soon in a cavernous sports hall. A glint comes into Pinfold's eye as he talks about it, not the glint of madness, but of another good idea that it has taken recession to help dig out of British academia.

A banana skin career path

Carla Rapoport profiles BP Chemicals' Robert Horton

THE MANAGEMENT tenets used to build up British industry simply don't apply to cutting it down. Most of the men who matured on expanding budgets have been slow to cope with austerity, often insisting that better times lay just ahead.

The middle runs of management are now filling up with men who've cut their teeth on bad times, who've earned their stripes by cutting back at the right time. Most of them are tougher, blunter and a bit meaner than their predecessors—but most of them are also more articulate, better educated and more in touch with the world outside their offices.

Robert Horton, managing director of BP Chemicals, a division of British Petroleum, is in this group. Aged 44, he's climbed the ranks at BP with agility, earning a reputation as a doer, even if the doing was simply undoing a lot of what was done before.

Now head of a division which is deeply in the red, Horton is facing the toughest challenge of his career. Many at BP say if he can make the cuts and changes necessary to bring the division back to profitability, he'll be an irresistible candidate for the chairmanship of Britain's largest company.

Horton claims that he hasn't considered the possibility of becoming chairman of BP. The modesty doesn't become him. He does admit that he seriously considered becoming a politician when he was younger and worked actively for the Tory party in the 1960s. His apprenticeship in politics clearly stands him in good stead when he's faced with leading questions.

On most other topics, Horton is expansive. He gesticulates generously and moves about his spacious office in Belgrave House in an energetic, not nervous, manner. He enjoys the self-confidence of a man who's known all along that he would succeed. So far, his record has matched his ambitions.

The son and grandson of men in the timber business, Horton was educated at King's School, Canterbury and earned a degree in mechanical engineering from St Andrew's University. He attended St Andrew's with the aid of a full grant from BP and joined the company in 1957.

He held appointments in oil supply, planning and marketing

in London and Europe. Coincidental with his own rise within the company was the advancement of the computer as a management tool. "It was an immensely useful time to come in—and there was a group of young men analysing the oil industry using quantitative methods for the first time," he says. This helped to change the industry dramatically, taking it from seat-of-the-pants decision-making to the more detached long-range planning methods.

At 30, "the best thing to happen in my life" befell him. He left BP for a year to attend MIT in Boston as a Sloan Fellow.

He enjoyed the informal atmosphere of Boston and his programme, soaking up conversations with Nobel prize winners, top U.S. business executives and politicians as part of the curriculum. He also soaked up some American management techniques.

"Americans have a greater degree of objectivity and much less attachment to the soft considerations like 'We've been in this business a long time, so let's stay in it'."

"Americans also have a greater degree of honesty about business conditions and are more rapidly adaptable," he says. Criticisms of Americans? They work too hard, he says, but admits to putting in 60 and 70-hour weeks himself.

Happy days

After returning to the UK, Horton worked in Europe for BP's downstream operations and in 1975 he was made general manager of the BP Tanker company. While there, he helped negotiate important cutbacks in the fleet. In 1976, he began a two-year stretch in corporate planning and in 1978 he was moved to BP Chemicals.

He was general manager of the division by 1980. "Those were still happy days," he says of his first year at BP Chemicals. In 1979, the division made £75m profit. Then, in April 1980, the industry fell off a cliff.

"It was like Armageddon," he says. "I remember somebody rushing into my office and saying 'Do you realise what is happening? People have stopped buying chemicals'."

Volumes soon collapsed, prompting companies to cut prices. Then naphtha prices went



Robert Horton: an optimist

up in line with oil prices and the industry was caught in an excruciating squeeze.

By the end of 1980, the division had racked up losses of over £130m and BP Chemicals was well into its programme of rationalisation. Today, the division is like an "after" picture in an advertisement for diet pills.

From its peak of more than 17,000 employees in 1978, BP Chemicals is now down to around 11,000. The list of plant closures is extensive, including facilities in Grangemouth, Stroud, Rhye and Sandbach as well as France and Germany. The company has cut out entire product lines, notably polyvinyl chloride (PVC), the versatile plastic used in both the home and industry.

What's left is now running at almost full capacity, with some help accruing to volumes from sterling's decline against the Danish. Profitability is still quite another matter, however. Horton admits that this is the year in which he has to produce the goods. Observers view his current position as a sort of glorified test, with the banana skins stretching from his desk to the door. Cynics say that Horton should continue rising even if he has to shut the division down—the crucial factor would be how well he did the deed.

For his part, he has no intention of losing his head. He's optimistic about his chances for bringing the

division round this year, but says that this depends on settling prices up and a good recovery in margins. "If that doesn't happen, he'll continue to rely on his favourite management tool—the blunt truth."

"I believe passionately in telling the truth, even if it's painful. I've always had the idea that if you tell someone the truth, they can understand what's happening."

Like any successful man, Horton has many admirers and detractors. One of his big admirers is Christopher Laidlaw, now chairman of ICL and formerly with BP for 33 years. "They still work together," says Horton. "It doesn't interest me. Rob is not like that."

Like me, he believed that too much time was spent contemplating their navel at BP," says Laidlaw. "It is easy to get sucked into a sort of mania about BP—if it doesn't interest BP Chemicals, then it doesn't interest me. Rob is not like that."

Impatient

His detractors also admire his success at BP but doubt whether he can ever hope to become chairman of the company. "He keeps switching around the company," says a former colleague who now works in the City. "You cannot sort out BP Chemicals in two years—it's a six or seven year job. Will he stick with it? If he keeps working himself around the company, he'll work himself out of a job."

Horton himself backs up his critics on one point—he tends to make decisions without much internal consultation. "I'm impatient. I've got to balance the belief that the British use endless rounds of committees as a substitute for management with the alternate belief that there may be another point of view from mine."

In December, Horton became chairman of the Chemical Industries Association, an appointment which no doubt means more meetings but also means the consolidation of his position within the industry.

But if the chemical division at BP is beyond the means of an ordinary mortal to sort out, would Horton go down with his ship?

His answer to such a question is apparent to anyone who's spent some time with the man—he's an optimist with a very buoyant grin.

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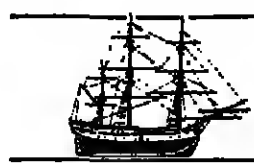
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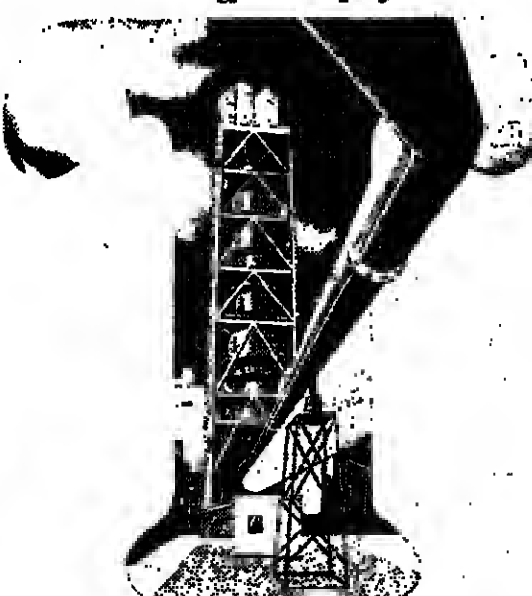
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THE ARTS

Noises Off/Savoy

Michael Coveney

Michael Frayn's brilliant play, triumphantly ennobled at the Savoy, is the funniest farce of our day. You have to go right back to Peter Shaffer's short *Black Comedy* to find anything approaching it, and it is set far to take its place alongside *Ragtime*, *Harlequinade* and *King's See How They Run* in a great English farce tradition.

Since it first opened at the Lyric, Hammersmith, a year ago, Mr Frayn and his director, Michael Blakemore, have done a lot of work to improve the third act, which was then a rather limp Pirandellian climb-down from the glorious excesses of the middle act. In fact, the director's contribution is as important an element here as in those 1980s combinations of John Dexter with Shaffer and Lindsay Anderson with David Storey. The other remarkable feature of the show is that the management have replaced the original cast with one that is, in my view, vastly superior.

The door dividing the theatre and life is kept wide open except when the play has fallen off in the hand of a hapless actor. A second-rate touring company is on the road with a second-rate comedy, "Noises Off." We first see them failing around in the last stages of a technical rehearsal in Weston-Super-Mare. A month later, a matinee in Goolie is in progress as the backstage shenanigans assume the farcical proportions of the destined stage genre. And now, in the third act, the two words collide in hysterical nemesis. "It's like a battlefield out there" is a remark commenting on backstage reality, not onstage disaster.

At first, as we get to know the characters, the problems involve the removal from the stage of a plate of sardines, the mutilation of a particularly dense blazer "juve" and the inarticulate frustrations of a keen leading man. There is also the absent-minded, possibly deaf and probably drunk timer. And the flash point of farcical misadventure is achieved when the "dolly bird" actress loses left lens. Mr Blakemore here orchestrates a sublime ballet (later reprised) as the company search furniture and footwear for the offending optic.

The agility, skill and inspired timing of this company places it in the forefront of all currently available ensemble enterprises in the capital. How they sustain the pressure, cope with all the props and execute the myriad pratfalls, sunnier entrances and battered exits, I shall never know. They work for and with each other, something I could not honestly have said of the original cast. In a way, the defensible Gabrielle Drake, as the gossip, winking trouble-maker, is now the show's engine room. But John Quayle's performance, which includes some amazing shuffles, bounds and leaps, incorporates that essential spirit of bemusement depending on people caught in the crossfire of theatrical reality and mundane illusion. We are concerned about these idiotic people because we see them subjected to the appalling demands of panic and despair.

Benjamin Whitrow is now the director, and the role is no longer the prey of post-mortem

vengeances. Instead, he ends up on stage in Stock-on-Tees second understudy to the burglar. While the tremendous complications of the second act may leave us anxious to know how the various love affairs and traumas are resolved, the conclusion is now one of blithe confusion, although we are left in no doubt as to how each character on the stage feels about his colleagues.

The play, felicitous and scintillating in the extreme, also manages to be an affectionate tribute to a vanished era of theatre while mercilessly satirising its manners. The language of theatre folk, their dedication and their innocence, is gloriously mocked. The programme within-a-programme, presumably scripted by Mr Frayn himself, at last justifies the price called by the usher, and the third act galvanising of Phyllida Law as the actress whose idea started the whole thing is one of the priceless treasures of the contemporary stage.

Allyn Grail, Mandy Perryment, Robert Fleming (what a marvellous old relic!), Robert Bathurst, and Mary Chilton are all absolutely superb. The problem now is the challenge of maintaining this production in prime condition for the length of its no doubt interminable run. For this extraordinary exercise in theatrical farce can only prosper in conditions of undivided attention and vigilance. I might add that, on Friday night, for the second time in a month, I laughed until I cried. And, as you no doubt know by now, I'm a dry and demanding young stick.

Care/Theatre Upstairs, Royal Court

Rosalind Carne

Parents who keep their infant children in black holes under the stairs need to have their heads examined. How extraordinary, then, that stage play managers to take up this horrifying subject without taking up its principle challenge — the psychological explanation.

After two hours of marital scraping we are no wiser about what happens at the end could just as well have happened at the beginning. There is not even an attempt to exploit the Hammer-style shock potential, apart from one worrisome moment when an innocent visitor hovers dangerously near the cupboard.

If we learn anything about

the background to such heinous crimes, it is the questionable assumption that lack of intelligence and education have a causal connection with lack of ethics. Terry, the father, is illiterate, inarticulate and cruel. Barely house-trained, he slops milk on the carpet and the kitchen floor and dumps his half-eaten breakfast in the living room grate, along with the used tea-bags. His perbraised wife enjoys his alcoholic embraces and they spend a lot of time romping on the plastic sofa, focal point of David Roger's appropriately tasteless interior design.

Peter-Hugo Daly and Gwyneth Strong give all they can to this nasty pair, he surly,

apellike and gormless, she fretful perpetually harassed, and emotionally and physically deprived. There are some lively, occasionally relevant exchanges with the nosy neighbours, and Jane Galloway is particularly good as the well-meaning, meddlesome, Cathy. They chatter on about football, TV commercial breaks, the weather, Terry's headaches, a routine slice of dreary lives, bearing no noticeable dramatic relationship to the subtextual story of human brutality.

Antonio Bird is the director, and she should at least be applauded for successfully creating an atmosphere, redolent of aesthetic and intellectual poverty.

Arthur Bliss/Wigmore Hall

Max Loppert

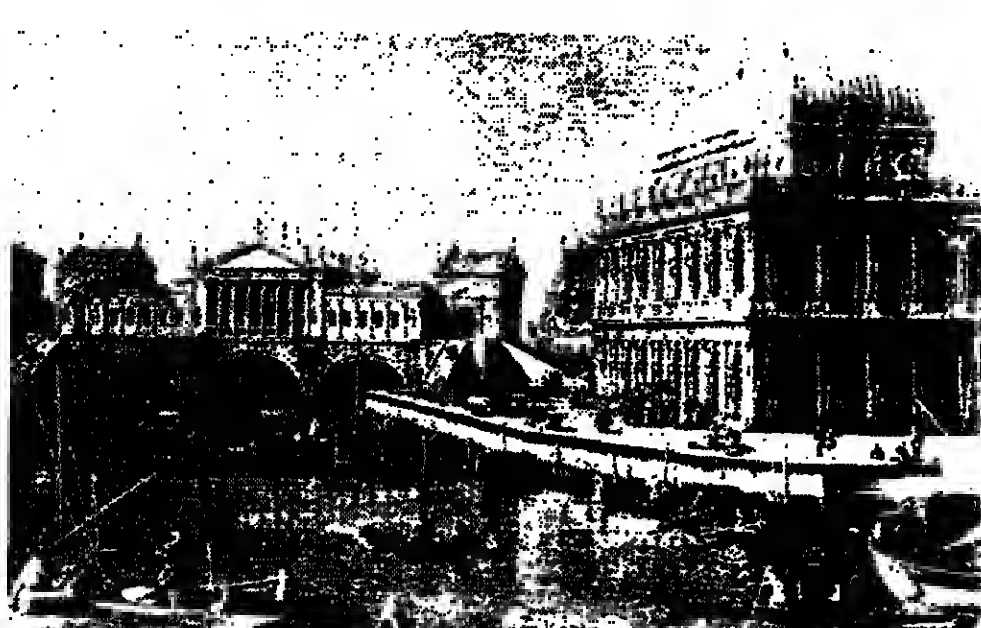
The seventh instalment in this season's Nash Ensemble "English Music 1900-1935" series covered the music of Arthur Bliss. Three exuberant song compositions for soprano and small ensemble encouraged us to delight again in the youthfully uproarious Bliss, presumed at the time avant-garde (though the error of this categorisation was soon enough revealed); in the Clarinet Quintet of a decade later (1931) we witnessed the composer's native inheritance, already detectable at the core of the earlier "experiments," being actively and expansively developed. Saturday's most rewarding concert, framed by Mozart's Adagio and Rondo and Clarinet Quintet, served to leave several valuable reminders — and the durability of Bliss's best music was not the least important of them.

With Lionel Friend in imma-

culate charge of the enlarged chamber groups, Elizabeth Gallos (1923), the "witchery song" *Madam Noy* (1918), and *Rout* (1923). The easy assimilation of the strong points of Ravel's writing for comparable vocal-instrumental forces in no way conceals a vein of melodic invention which the ear immediately deems "English," and which warmly furnishes even the five miniatures on Chinese poems. Miss Gale delivered their better-known companion pieces with quite as much alertness of timing and nuance, and with tone ever more firmly placed; it is now clear that their timeless charm lies not so much in their modernist sympathies — in this respect Walton and Fagade afford an apt parallel — as in their blend of approachable lyricism with a pleasing sense of the absurd in plays upon words. The nonsense text

of *Rout* is made to sing as naturally, and with as much comprehensibility, as a nursery rhyme.

If, in the light of Bliss's mature compositional style, these early pieces must be reckoned spurious, the Nash order of performance (quietest before vocal works) helped to underline links between the two periods which worked both ways round. For though the quintet utters its thoughts in the gentle accents of English pastoral diatonism, there is no want of muscle in their formal control or passing acerbity in their harmonic language, to clarify the perpetuities of that diatonism. In all of these works the mastery of Bliss's craftsmanship and the unmistakable authority of his speaking voice supply a common factor, as did the smooth yet sinewy quality of the excellent Nash playing.



Canaletto's Capriccio of Venice inspires the new architecture of Aldo Rossi at the ICA, London

Architecture

Colin Amery

Mr King's good intentions

The Minister looked benign and interested. The developers, lawyers and bankers beamed in a brotherly fashion as though all were sharing a secret. It was the occasion of Mr Tom King's coming-out party — his first speech on the subject of art and architecture as the new Secretary of State for the Environment.

He chose the excellent opening exhibition at the Institute of Contemporary Art, where a season has begun on the vital theme of Art and Architecture, to declare his interest in an inevitably anodyne fashion that good art and good architecture were a Good Thing and that we should have more of them.

Winsters seldom speak with passion about anything other than politics and it is something of a triumph to hear the words art and architecture fall from their lips at all. Mr King is a more reflective man than his predecessor and it is to be hoped his enthusiasm for competitions will be controlled.

He promised the profession that the government would continue to encourage more competitions — please Mr King get the rules straight before you go any further. The developers and the bankers looked happy because in a remarkable piece of sponsorship more than 60 firms under the gentle eye of Mr Stuart Lipton of Greycoat City Offices have made possible this season of architectural exhibitions that will run at the ICA in London until May.

All the auguries are good. What about the first exhibition? Until February 20 *Ten New Buildings* and the work of the Italian architect Aldo Rossi is shown. It is a great contrast to the rather dull exercises by Josef Kihlhaus for the town centre of Wulfen in West Germany.

I liked the modest restaurant by Clotet and Tusquets on the hills of Barcelona built, according to the architects, "not to frighten the customers." More frightening because of its almost unbearable pretension is Frank Gehry's Loyola Law School in (where else?) Los Angeles. It is full of his usual

history of their surroundings and in general look less like the kind of sore thumb architecture that has blighted most European cities since the war. Universal, functional approaches are out. Particular and romantic regional approaches are in. At least that's the theory.

James Stirling's museum in Stuttgart looks like a 19th century view of what a museum should be. It has a pomposity and weight of form and materials, that springs from the formality of its planning.

It is interesting to compare Stirling's museum with the entry by the Viennese architect Hans Hollein of his museum at Mönchengladbach. Both share a monumental complexity as the basis of their designs. Both attempt to incorporate elements of the townscape into the whole site of the museums in a kind of informal collage. Both buildings seem to me to enshrine a kind of urban hostility partly because they so determinedly ignore nature and partly because they are so manifestly concerned with the private theories of the architects. It is precisely these initial difficulties that make both museums worth exploring.

Why in the end are they so visually unappealing? The Tsukuba Civic Centre by the leading Japanese architect Arata Isozaki is an amazing mixture of European and Japanese elements. It has a sunken plaza at its centre that has grown from Michelangelo's Capitol in Rome. It is a great contrast to the rather dull exercises by Josef Kihlhaus for the town centre of Wulfen in West Germany.

I liked the modest restaurant by Clotet and Tusquets on the hills of Barcelona built, according to the architects, "not to frighten the customers." More frightening because of its almost unbearable pretension is Frank Gehry's Loyola Law School in (where else?) Los Angeles. It is full of his usual

tricks, cutting the building in half, distorting proportion, using cheap and nasty materials. The result looks like a dog's dinner and the trendy American critics sniff them up and down and applaud them. I always think Mr Gehry must be almost dying of laughter — or be serious?

There is a lot missing from this exhibition. Where are the younger architects who are not members of the international architects' circus? Where are those architects who understand landscape and nature? Why do we only see the architects who are always in the architectural magazines? Does it work as an exhibition that the public will enjoy? I am not sure that the rather straight presentation is enough — all the time you want to know why the architect has done something one way rather than another — and the display doesn't answer you.

The Aldo Rossi show is in its simple way more comprehensible; he is an artist working out his fantasies in architecture. If you understand the fairly simple and ordered vision Rossi offers and are not bothered by its stamant nature this show offers you his work on a plate. Analogue and typology resonate through a limited visual vocabulary — my worry is that his built work simply cannot bear the weight of his theory.

The ICA offers an excellent beginning to their Art and Architecture campaign. I hope it will be more original in future and take a few risks in presentation as well as ideas. As the first two in the cloudy international waters that have been much trodden by others abroad it is, in a typically British way, late but in earnest.

Arts Council spring touring, 1983

A three-week first visit by English National Opera to the recently opened Plymouth Theatre Royal, in May-June; the return of Kent Opera to the refurbished Theatre Royal Bath in April; Bristol Express and Channel Theatre Company on their first Arts Council supported tours, and the return of the Royal Shakespeare Company to Newcastle for six weeks; the first middle-scale dance tour supported by the Arts Council

by London City Ballet, and a first appearance by Northern Ballet Theatre at the new Derrig Centre, Northampton, are among the highlights of the spring touring subsidised and co-ordinated by the Arts Council.

A total of 14 drama companies, six opera companies and 10 dance companies will between them provide approximately 200 weeks of touring to over 160 venues throughout the country.

Tosca/Covent Garden

David Murray

Ideally, everybody should see Tosca brilliantly performed once, and never again. It would be an indelible experience, and we should reminisce about it a lot, but it wouldn't clutter up the repertoire. Average-to-good Toscas are at best unedifying, despite Puccini's innumerable ingenious touches (most of them evident first time round); either the opera is potentially histrionic and harrowing, or it is really nothing at all. Saturday's performance, the three-hundredth at the Royal Opera, was quite good.

The "Zemfreck" production is now efficiently staged by Steven Pimlott, and Renzo Mongiardino's sets are still bold, handsome and well lit. There is a first-rate new conductor, Garcia Navarro, who balances the score scrupulously and shapes each successive event with a sure hand (there was unusual urgency in the first part of the Tosca-Scarpia confrontation, and it sounded absolutely right). The smaller roles are soundly filled, including a very dignified fugitive from Richard Van Allan, though I fancy that Puccini expected a more heartily innocent voice for the Shepherd Boy.

Giacomo Aragall is the Cavaradossi, replacing somebody

else. He sang with unfailing good taste and never looked anyone straight in the eye, which suggested something more private and evasive than revolutionary commitment. "E luccavan le stelle" was honestly moving; in the earlier acts one missed any ardent thrust in the face. Karl Murrain's Scarpia is plainly received, decently effective, too anxiously forceful at climaxes to register full malcontent authority. He dominates the "Te Deum" by effort, not by natural weight, and he is assigned some dandyish fan-play that doesn't suit him.

Gwyneth Jones ought to be a splendid, ripe Tosca, but isn't. Her singing was soft-edged and regularly behind the beat. Instead of using the finest jealousy-displayed to establish that Tosca is a formidable mistress with claws, Miss Jones strives to persuade us of her frailty and her sweet temper. But Tosca who is just a kind girl with occasionally bad luck is nowhere near so affecting as a flamboyant, arifil lady who braves perilous odds with style — her "Visti d'arte" is surely as much a piece of superb tactics as a heartfelt lament. In this role, mere sincerity is melodramatic.



Gwyneth Jones

Secret Gardens/ICA

Rosalind Carne

The title misled me. I expected an aesthetic flirtation with the incidents and imagery of a well-loved childhood novel, which arise, fall and recur with the structural assurance of a classical sonata. Moreover, there is a beautifully synchronised pre-recorded keyboard score by Orlando Gough and Andrew Poppy.

The seven performers dance, glide, strike attitudes and speak various languages. Their pace is faultless and from a purely technical point of view, the occasion is a tour de force. It is also an extraordinary feat of imagination, picturing life as a series of formal postures, steeped in sickness, and interspersed with manic bursts of doomed gaiety. A woman enters, describes her godlike swimming instructor or her exquisite house, both equally objectified. Nothing it seems can close the gap of separation between us all. Even in their most intimate moments, human beings leer at each other, destroy each other.

When they speak of Revelation, it is as if their vision of heaven is itself belittled to four square walls, carefully measured to suit the numerologist. Keys, handbags, boxes, homes, we are all horribly confined.

of swelling suffocation. But this event marks a major step forward in the concentration of its imagery and in the themes which arise, fall and recur with the structural assurance of a classical sonata. Moreover, there is a beautifully synchronised pre-recorded keyboard score by Orlando Gough and Andrew Poppy.

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Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

February 11-17

Music

ZURICH
Tonhalle Zurich Chamber Orchestra conducted by Edmond de Stoutz with Maurice Andre, trumpet. Handel, Vivaldi, Telemann, Purcell and Bellini (Mon); Oleg Matvienko piano recital, two CDs (Tue); Sofia Ashkenazy, piano, Mozart's Chopin (Wed); Trio a Cordes Festival. Brevet, Roussel, Xenakis and Beethoven (Thurs).

LONDON
English Chamber Orchestra and Pro Musica Chorus of London conducted by Charles Mackerras with soloists Margaret Marshall, Felicity Palmer, Keith Lewis and Harold Swann. Mozart, Royal Festival Hall (Mon); Alban Berg Quartet: Beethoven, Queen Elizabeth Hall (Mon); London Sinfonietta conducted by David Honegill with Ian Jacques, horn, Vaughan Williams, Britten, Holst, Barbican Hall (Mon); London Symphony Orchestra conducted by Yuri Simonov with Victor Tsygankov, violin, Rimsky-Korsakov and Tchaikovsky, Royal Festival Hall (Tue); Moscow Choir and Orchestra conducted by John Eliot Gardiner with Nina Milikina, piano, Mozart and Haydn, Queen Elizabeth Hall (Tue).

NEW YORK
New York Philharmonic (Avery Fisher Hall, Lincoln Center): Zubin Mehta conducting, Ju Hee Suh piano, Wagner, Mendelssohn, Brahms, Tchaikovsky, Royal Festival Hall (Tue); Zubin Mehta conducting, Hildegarde Behrens soprano, Schubert, Schoenberg (Thurs); Carnegie Recital Hall: (57th & 7th Av) New York New Music Ensemble (Tue); Columbia String Quartet, Bernard Yonnetta clarinet, Quincy Porter, Beethoven, Bartok, Brahms, League-ISCN, Sheila Silver Jones

Wagner Centenary concert. Barbirolli Hall (Tue); Peter Dinklage, cello and Ingrid Haarer, violin, Beethoven, Wigmore Hall (Tue); BBC Symphony Orchestra conducted by Mark Elder with Piotr Paleczny, piano, Stravinsky, Szymanowski and Strauss, Royal Festival Hall (Wed); Elizabeth Harry, soprano, with Ior James, horn and Clara Taylor, piano, Barber, Howells, McCabe and others, Purcell Room (Wed); Philharmonia Orchestra conducted by Kurt Sanderling with Mayumi Fujikawa, violin, Haydn, Mozart and Beethoven, Royal Festival Hall (Thurs).

WASHINGTON
The English Chamber with Simon Standage, violin, Elizabeth Wilcock, violin, Anthony Pileth, cello and Trevor Pinnock, harpsichord, Wigmore Hall (Thurs); Kammerchor, Fifth Street George Adams, Don Pullen quartet, until Feb 28, (430/9747).

CHICAGO
Chicago Symphony Orchestra (Hall): Claudio Abbado conducting, Ivo Pogorelich piano, Chopin and Berlioz (Thurs); (535/8122).

PARIS
Shirley Verret recital, Warren Wilson, piano: Handel, Schumann, Chaus-

son, Debussy (Mon); Theatre de la Ville (Tue); Gidon Kremer, violin, Andras Schiff, piano: Sonatas (Mon); Theatre des Champs Elysees (Tue); Ensemble Orchestral de Paris conducted by Jean-Francois Paillard, Andre Bernard, trumpet, Pierre Rouiller, Bernard Chapuis, Dutes, Daniel Arrignon — oboe: Telemann, (Tue) Salle Gaveau (563/2030); Alfred Brendel, piano: Beethoven sonatas (Tue) Salle Pleyel (563/8878); Jon Vickers with Geoffrey Parsons, piano: Schubert's Winterreise (Wed); Theatre des Champs Elysees (723/4777).

BRUSSELS
Orchestra de Paris conducted by Krzysztof Penderecki with Mstislav Rostropovich, cello: Penderecki and Sibelius (Wed, Thurs) Salle Pleyel, (563/8878).

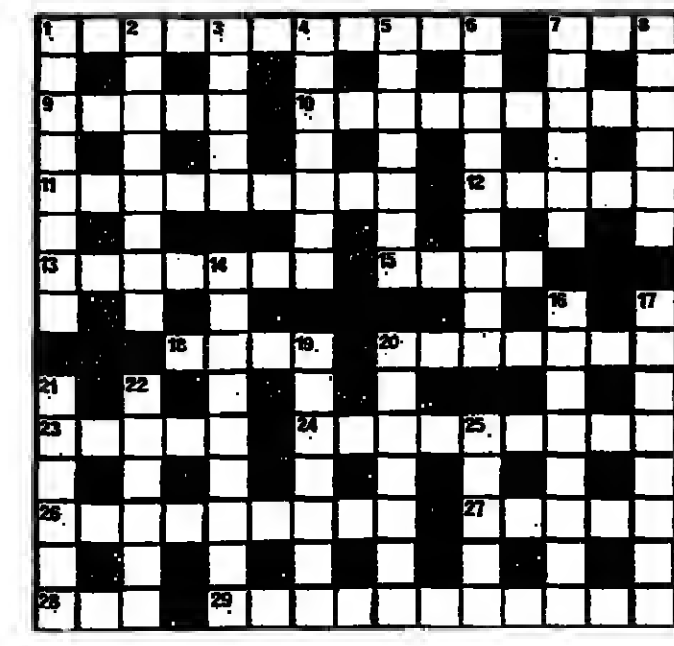
VIENNA
Musikverein (553/810) Kuchl Quartet, Haydn (Mon); Vienna Symphony Orchestra, Conductor Eduardo Mata, Beethoven, Wagner and Stravinsky (Wed and Thurs); Konzepts (72/121): Haydn Trio, Schubert and Brahms (Mon); ORF Symphony Orchestra, Conductor Erich Bergel Bruckner (Thurs); Liza Bruckner-Halle, Peter Schreier, Lieder recital, piano Eric Werba (Thurs) Brahms and Schumann.

CHICAGO
Chicago Symphony Orchestra (Hall): Claudio Abbado conducting, Ivo Pogorelich piano, Chopin and Berlioz (Thurs); (535/8122).

PARIS
Shirley Verret recital, Warren Wilson, piano: Handel, Schumann, Chaus-

F.T. CROSSWORD PUZZLE No. 5,097

- ACROSS**
- Break alternative arrangements (3-8)
 - Quantity of money returned in muslin (3)
 - Father went first having become rather less important (5)
 - Choice for the Spanish in part (9)
 - Re-order back-biller (9)
 - A Gaelic resort of course (5)
 - Hide in a corner of the island (7)
 - Nothing about a spike (4)
 - Animals rush back (4)
 - Team that might gain a win on the south coast (7)
 - Animal returned along a London street (5)
 - Paris corn can be made suitable for re-use (5-4)
 - Junction past eight maybe (8)
 - Order, say, by a Greek character (5)
 - Alternative, we hear, to reverential wonder (3)
 - Explain how the barn is illuminated (4, 5, 2)
- DOWN**
- High-ranking officers in the orchestra? (3-5)
 - Covenant of mutual friendship for some non-league clubs (5)
 - Drain off to this point (5)
 - The indispensable quality of
 - perume (7)
 - Serf finds French town fashionable (7)
 - It is profitable to have most of the luck with four in charge (9)
 - Fasten using one in time (6)
 - Singular record to be exact (6)
 - Look at large growth in the French facial hair (9)
 - Reunites members who are hungry (8)
 - Keep up support (8)
 - Badge shows 18 surrounding the badger a burrow (7)
 - Stimulating non-alcoholic drink (7)
 - Shells converted by a prophet (8)
 - One to get on will supervise (8)
 - Spike is no amateur, no good (5)



Solution to puzzle No. 5,095



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Monday February 14 1983

Hand-to-mouth debt strategy

SIR GEOFFREY HOWE will no doubt have returned from Washington well pleased to have achieved agreement on a 4 1/2 per cent increase in International Monetary Fund quotas, after what appears to have been a cliff-hanger of a meeting. It is a useful advance on the 40 per cent increase which the Americans proposed; and assuming Congressional agreement—which cannot entirely be taken for granted—he can now leave it largely to the central bankers to determine how the garrison is to be kept going until the promised relief arrives. The IMF, now down to its last \$800 of uncommitted funds, can plan its future operations with rather more confidence.

Does this agreement really solve anything, though? Only a rather optimistic assumption. If the revised monetary and fiscal strategies of the British and American Governments (though not, so far, the German or Japanese authorities) are successful, rising activity and falling real interest rates will in due course melt the debt problems away like so much winter snow. Rising activity will raise not only the volume but the price of developing country commodity exports; reasonable real interest rates should make the existing burden of debt sustainable. Music, curtain, and we can all go home.

Alternative
 Unfortunately, though, this happy ending cannot be taken for granted. There is an alternative scenario in which the world economy performs rather than the British economy has for the past two years, drifting from one false dawn to the next, while the underlying dilemma is only very slowly resolved.

This gloomier view is supported by some quite persuasive arguments, and the IMF's rather less telling evidence. The arguments are basically financial. Countries and companies in debt must give first priority to improving their balance sheets. Consumers cannot borrow without limit. Debtor countries are now adopting austerity programmes from sheer necessity—which is the reason, incidentally, why it is so misleading to characterise IMF "conditionality" as a further depressing influence. The IMF's programmes, and the continued bank lending which is now insisted upon as a condition of IMF support, generally make it possible to adopt a less drastic programme of adjustment than would be needed without them. On this account, at least, the Washington agreement is a solid gain.

Approach
 All this argues, as we have suggested before, for an approach to debt based on re-funding outside the banking system. This is the starting point of the Robatyn plan, the Kenen plan, and several other proposals now being hotly debated within the financial community. Some involve cash penalties for imprudent bankers, others rely on price- or trade-related indices to make debt servicing sustainable. None yet appears to be on the official agenda even for discussion. This is an omission Sir Geoffrey should remedy.

The evidence is more mixed. There seems to have been a genuine improvement in the U.S. business climate in recent weeks. Against this, business investment is sharply down, and January retail sales were disappointing. The trend of interest rates remains an enigma.

Wishful
 At this stage, however, there is no need to reach firm conclusions. A financing strategy cannot be founded on wishful thinking, and there remains a clear risk that the world economy will enjoy only the momentary illusion of recovery which accompanies any turn in the inventory cycle, before relapsing into stagnation. If this is the case, Sir Geoffrey could find himself the Pearl White of international finance during his term as chairman of the IMF interim committee, ever in peril, and with everyone (not least the bankers) waiting breathlessly for the next instalment.

The economic outlook is one strong reason for seeking a more radical approach to the debt problem: the politics of debt provide another. The U.S. Congress naturally finds it distasteful to vote for more borrowing on behalf of foreign countries when it is desperately seeking ways of reducing domestic borrowing. They are not the only opponents of the present approach.

There is a strong school within the German and Swiss central banks who regard proposals for ever-larger IMF and bank credit lines as fundamentally inflationary. They have also shown a more robust attitude than the British to banking failures in the past. They believe, as Admiral Byng was bawled, that disaster may set a salutary example.

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power Services Commission is offering £7m in 1983-84 to local education authorities wishing to experiment with technical and vocational studies for children aged 14-18, with the last two years including experience in working organisations. The £500m which the Government is to spend on expanding its Youth Training Scheme in the coming year will do little to get rid of this unhelpful image. For it is taken as almost self-evident throughout the country that entrance to the scheme will overhedge formal education with few if any pass grades in the essentially academic school-leaving examinations.

Case
 There is a strong case for the introduction in schools of a significant element of practical learning as part of the central curriculum to be pursued by all pupils from an early age.

Since pass grades in only five academic subjects at Ordinary level are required for university entrance, whereas pupils commonly study seven or eight to the age of 16, there seems no intrinsic reason why the substitutions of a couple of practical studies should inhibit the intellectual development of children whose interests run in academic directions. Among those inclined in other ways, the possibility of gaining recognised success and developing their abilities by an alternative route of practical education could often stimulate them to pursue academic achievement well.

It is 7.30 am on a raw winter's morning in Smyrna, Tennessee. Laughing and self-consciously, two dozen American office workers bounce and swing in time to Japanese music from a small cassette recorder. A Japanese executive, General, as his way to the temporary office buildings, puts down his briefcase and joins in the exercises.

A little way down the road, Nissan Motor's giant new assembly plant is nearing completion. Costing a total of some \$600m, which makes it easily the biggest Japanese investment in the U.S., the plant will produce its first vehicle—a light pick-up truck—on August 1. Six months later, the line should be running at a rate of 6,000 trucks a month, and that figure should double when a second shift is introduced in 1984.

For the U.S. executives running the company, many of whom come from a Detroit background, the plant represents a totally new approach to the business of making vehicles in the U.S. For the Japanese parent company, the plant is part of a long-term strategy that will take many years to pay off.

And for the citizens of Smyrna, a town with some 9,000 inhabitants surrounded by scrubby cotton and soy fields, the new facility will bring fundamental changes to the character of their community. Generally it has been welcomed as a source of badly needed new jobs. But some of the older inhabitants have decidedly mixed feelings about the fast food restaurants, the shopping centres and the big new roads which are already ripping their way into the neighbourhood.

For the old Detroit hands, the most obvious difference in Nissan's approach lies in its enormous investment in training. "I've been involved in 11 start-ups and expansions of Ford, and I've never seen anything approaching this," says Mr Larry Seltz, manager of training.

Nissan is spending more than \$500m in getting its technicians and workers up to the mark, and as part of the programme it has sent 383 employees to Japan for periods of up to 24 weeks to learn the Nissan way. Some technicians will have been on the payroll for two years by the time the first vehicle comes off the line.

One feature of the training has been an emphasis on developing a range of different skills for each worker, so that a problem on the production line can be resolved without the need to call in half a dozen specialists. Another lies in Nissan's approach to quality control.

It is significant that two out of the four permanent Japanese executives at the plant are on the quality assurance group (the other two are on the design side). Mr Shuichi Yoshida, known as Sidney in Smyrna, is vice-president for quality assurance. "For the moment, quality is the top priority," he says. "When we are certain that is right, we will turn our attention to production."

This drive is taking Nissan into its suppliers' factories where it is seeking to impose its own standards. Nearly two-fifths of the parts in the truck will be produced within the U.S., and Nissan's goal is to set up long-term relationships with single suppliers who will undertake to deliver parts on the production line when they are needed. To meet these demands, one company—Hoover Universal—is building a plant in the area from which it will supply the seating for the truck.

Quality control within the plant will also have more in common with Japan than with Detroit. Although there will be a number of inspectors at strategic points on the production line, the main responsibility for checking the work will lie with the production workers themselves.

All this seems to have produced an almost evangelical enthusiasm for the project on the factory floor, which Nissan hopes to harness in its management style. According to Mr Marvin Runyon, a former Ford executive who is president and chief executive of Nissan's U.S. manufacturing operation, "everyone here will be participating in decision making."

In order to develop the broad lines of communication which are necessary for such an approach, there will be only five levels of management in the plant up to and including the president. Ford would probably have more than twice that number.

Nissan executives admit there are big differences between the Japanese and American character—and these are obvious even in superficial ways. One lady lurches away from voluntary morning exercises to take comfort in black coffee and a cigarette, others have blended their free, and voluntarily worn, Nissan uniforms with fetching country and western style accessories.

Japanese in Tennessee

A totally new approach to making vehicles

By Richard Lambert in New York

periods of up to 24 weeks to learn the Nissan way. Some technicians will have been on the payroll for two years by the time the first vehicle comes off the line.

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'THEY'VE BEEN HONEST... SOMETHING WE'RE NOT ACCUSTOMED TO'

ON A drab industrial estate a few miles down the road from Smyrna, a large factory is churning out heavy duty radial tyres for the U.S. truck industry. On the surface, nothing much has changed about the place since Bridgestone Tire of Japan, the world's fourth biggest tyre maker, completed the purchase of the plant from Firestone last month.

But both management and labour say that morale at the factory has already taken a marked turn for the better—and that this has been reflected in productivity. In its more modest way, Bridgestone's investment represents just as significant a development for U.S. industry as Nissan's much grander project.

Almost since it was opened by Firestone in 1972, the Tennessee plant has been a disaster. Its new owners say that it was designed to produce around 4,000 tyres a day, but its daily output last year was drifting down to around 600. It has had no

new investment to speak of since it was opened, and its labour record has been grim. After a two-year struggle in the courts, Firestone finally allowed the United Rubber Workers to organise the plant in 1979—and promptly faced a three-month strike. The U.S. company made no secret of the fact that if it had not been acquired by the Japanese, the plant would have been closed.

Bridgestone had been toying with the idea of U.S. manufacturing for years, and as early as 1974 it came close to buying an existing factory in Colorado. Over the years it has built up its share of the U.S. market for radial truck tyres to around 10 per cent, making it number three after Michelin and Goodyear. By contrast, its share of the market for passenger car radials is less than 1.5 per cent.

The Japanese company decided that it would need local manufacturing capacity if it was to get a much bigger share of the U.S. truck market, and a study group was researching possible

greenfield sites when in October of 1980, Firestone proposed a deal over the Tennessee plant. Never a company to move at enormous speed, Bridgestone agreed to early last year to buy the plant for \$52m, subject to certain conditions. One of these was a satisfactory deal with the United Rubber Workers.

The negotiations which followed were not about wages—these had already been settled in a labour contract with Firestone—and both sides agree that Bridgestone was not looking for radical changes in established working practices. All the same, the talks appeared to reach an impasse at one stage. The Japanese walked out and flew home.

"It was more a misunderstanding than anything else," says Mr Tommy Powell, president of the Rubber Workers Local 1065. "We are used to putting up proposals and negotiating around them. They took our proposals as something cast in

concrete."

But an agreement had finally been reached by early October, and the mood in the factory began to change. Middle Tennessee is not the most cosmopolitan of regions. A sign in the local union office reads "Buy a foreign car and put 10 Americans out of a job." And Mr Powell admits to having mixed emotions about the idea of foreign ownership. But he says that so far Bridgestone has not put a foot wrong.

"Up to this point they've been honest with us," he comments pointedly. "This is something we are not accustomed to."

For the moment, the factory is going through a honeymoon period. By the end of 1982, the workforce had been whittled down to less than 700 hourly paid and salaried employees, but Bridgestone has already recalled 170 of the 400 or so laid-off workers, and says that more jobs will become available as production builds up.

For the rest of this year, the plant will only be making tyres under contract for Firestone. But Bridgestone's own tyres will also start to roll out next January, and according to Mr Kazuo Ishikure, president of the U.S. operation, "our immediate target is 1,500 tyres a day. In three years' time, we aim to be making at least 3,000 a day."

Bridgestone expects to spend around \$35m on the plant over the next five years, mainly on updating the technology and installing much more sophisticated testing equipment. Under Firestone, it says, the quality of a tyre produced at the plant could vary significantly from day to day. An important goal for its new managers will be to reduce the degree of deviation in the product.

His target, Mr Ishikure declares disarmingly, is to get productivity up to "at least" 50 per cent of Japanese levels.

Since wage costs are higher in the U.S., Bridgestone executives admit that strictly on the basis of production costs it would probably be more efficient to produce the tyres in Japan and ship them over. But, they say, there are many other factors to consider. Apart from general trade and political issues, these include improved service to customers and an ability to produce designs better suited to the characteristics of American roads.

Finally, at the bottom line, it is better to be here, says one manager. Eventually Bridgestone plans to make 80 per cent of its U.S. truck radials in Tennessee, and import the rest from Japan. For his part, Mr Powell believes that union members will be prepared to accept gradual changes in work practices over time.

Men & Matters

Home-spun

The past four years have been a bit of a whirl for Alan Laver, rather like passing through a fast-spinning door.

In 1979, the 46-year-old chartered accountant joined Michael Ashcroft's "hyperactive" Hawley Group as company secretary.

In 1980, he helped bring one of Britain's biggest ski-wear retailers Pindisports, along with five other companies, into the group. The following year he was given responsibility for the management of the group's leisure retailing.

Then last year, Hawley demerged these activities and their management into the Carrara Group. And today, a slightly breathless Laver emerges, in another spin-off, as chairman and principal individual shareholder of an independent Pindisports.

Laver, with former Hawley colleague Stephen Foot, and Pindisports fashion designer Cindy Frie, has bought the company from Carrara for £750,000.

In addition to the private capital involved, the buy-out has been financed by Meritor Investments, a specialist equity finance company jointly owned by Carrara and the Rolls-Royce Pension Trust.

The opportunity to develop independently was created by Carrara's own need to expand into other areas," says Laver. He has never set foot on a ski slope. "But I can ask the silly questions about the business."

Pindisports—founded in 1946 as a war surplus distributor and with shops in London and Bristol—plans now to consolidate its position in the ski-wear and equipment market, expand its trading base, and like Carrara, aim eventually for a place in the Unlisted Securities Market.

Oily words
 East Germany's need for oil seems to have outweighed its devotion to the cause of international communism.

Just a few days after the apex leaders of the Cuban (Communist) Party in Tehran and their reported confession to spying for Russia, East German President Erich Honecker has sent a fulsome message of congratulations to the Ayatollah Khomeini on the anniversary of the Iranian Islamic Republic.

Honecker's telegram—published in full on the front page of the Neues Deutschland newspaper—says the victory of the revolution over the "despotic Shah regime was a severe blow to the hegemonistic policy of U.S. imperialism and an important contribution to the people's struggle for national independence."

Honecker signed off by wishing His Holiness—health, happiness and creative powers."

scientific business these days. It all started when Lord Vernon's library at Sudbury Hall, Derby, was flooded, soaking in priceless books, including a priceless collection of 16th and 17th century works.

Oxford's Bodleian Library was consulted about restoring the water-damaged pages—and the conservator of books, remembering the problem, remembered a conversation two years previously with Dr. Roger Angold, of RHM Research, in the centre established by the late Lord Rank at High Wycombe 20 years ago and now engaged in food processing and agricultural research for Rank Hovis McDougall.

Angold had suggested that the accelerated freeze drying process, commonly used to preserve foodstuffs such as scampi, strawberries and coffee, might be used to remove excess water from books without affecting the structure of the paper or bindings.

Vernon's books were quick frozen, the ice removed by applying a high vacuum and gentle heat—and the books are now back on his library shelves.

RHM is now at work on a consignment of sordid ledgers and documents recently retrieved from the basement of a City bank.

Loss leaders
 Life is still wilder out west. It seems. Five banks were robbed in one day recently in Toronto, and Canada's financial capital and most populous city now threatens to displace Montreal as the world's best business centre for bank-robbers.

Canadian Bankers' Association says there were 336 bank robberies in Montreal in 1982, compared with 181 in Toronto. That ratio has continued in the first six weeks this year.

But the Toronto raid-rate was up by 186 per cent from 1981, while the Montreal rate, reflecting some success with new protection programmes, was down by 48 per cent.

Traveller's fare
 Travellers who claim to suffer jet-lag when flying through a few time zones may be tempted to arm themselves with a plastic card of instructions like this being issued free of charge by one of the big American research centres.

Scientists at the Argonne National Laboratory near Chicago have been taking jet-lag, and the disarray in sleep patterns suffered by shiftworkers, seriously enough to invent a diet to counter the effects.

Dr Charles Ehret of its division of biological and medical research recommends a diet regime starting four full days before the first breakfast after touch-down. The routine is to alternate between feasting and fasting ending with a final fast (without alcohol) on the flight.

The full rigours of Ehret's regime will be explained willingly by the Argonne National Laboratory people, Illinois.



It takes until we are organised at Nissan Motors," he declares. Nissan does not want to give employees any reason to call in the union. We have made a commitment to our employees that our annual pay will be comparable with that of other U.S. automotive workers, and actually it will probably be better," says Mr Runyon. The pay package will include productivity bonuses and lots of benefits. All employees will be eligible for cars, for instance.

This approach has obvious implications for the Japanese parent company. Mr Runyon says that U.S. auto workers earn 80 per cent more than their Japanese counterparts. Even though there is more automation at Smyrna than at any of Nissan's plants in Japan, he admits that it will be more expensive to make a truck there than to ship a Japanese vehicle into California and pay a 25 per cent import tariff.

"Those extra costs will not be reflected in the sticker price," says Mr Runyon. The price of the vehicle will be right in line with that of similar models which are currently being imported by Nissan.

Mr Runyon says that the Japanese have not set a profit objective for their new plant. "We've put the best equipment we can get, and we've trained our people the best we can and we're going to put that all together and come out with the best possible costs we can," he adds.

The U.S. operation seems bound to succeed. Mr Runyon believes that they otherwise would have been for some considerable time—especially given the strength of the dollar against the yen since the project was conceived. But Nissan sold 578,000 vehicles in the U.S. in 1982, of which 108,000 were in the light pick-up truck category. In building the Smyrna plant, the company is recognising that over the long term it will have to produce vehicles in the markets where the car is sold. And pick-up trucks, which compared to passenger cars require few model changes and, short production runs, are the obvious place to start.

But Mr Doug Fraser, president of the UAW, has other ideas. "We'll keep going back and going back if that's what

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BERTIE RAMIFICATIONS

Observer

THE PALESTINE NATIONAL COUNCIL

Hard choices for the PLO

By Patrick Cockburn

HEAVY WINTER rains have turned the Palestinian refugee camps in south Beirut into barely passable swamps. Along their narrow lanes, now turned to muddy brown streams, the survivors of last September's massacre are still trying to scrape a living. They are repairing houses damaged by artillery and a few small shops have reopened.

Like most of the 400,000 Palestinians in Lebanon, the inhabitants of Chatila and Sabra camps are frightened. Their main concern is survival. They look apprehensive despite the presence of Italian troops in white personnel carriers and tough-looking French soldiers, all members of the multinational force stationed in Beirut.

A bedraggled black flag at one end of the camp marks a mass grave where some of the 800 Palestinians murdered by Christian militiamen are buried. The scattered wreaths are beginning to dissolve under the impact of wind and rain. For the people in the camp they are an unnecessary reminder of the massacre. "We stay because we have nowhere to go," said one Palestinian.

This same bleak lack of options faces Palestinians throughout the Middle East.

The U.S. holds 80 per cent of the cards

Since the Palestine Liberation Organisation pulled out of Beirut last August it has sought some political gains to compensate for the military defeat it suffered. So far these have proved elusive.

The significance for the rest of the Middle East of the despair now felt by many of the 4m Palestinians should not be underestimated. All the Arab governments, be they monarchist or revolutionary, lost credibility at home last year when they failed to help the PLO besieged in Beirut by General Ariel Sharon, the then Israeli defence minister. This humiliating failure, belying years of bellicose declarations of solidarity with the

Palestinians, has destabilised all the regimes in the area from Libya to Saudi Arabia. Their continued incapacity to influence Washington, or, indeed, anybody else increases the chances that some rulers, as after previous Arab defeats by Israel, will answer with their heads.

The key political benefit for the PLO since the end of the siege of Beirut is President Reagan's peace plan of September 1. At its centre is the future of the Palestinians. It envisages Palestinian autonomy for the West Bank and Gaza in association with Jordan. The PLO will have no formal role in negotiations and statehood is not mentioned but Palestinians are keenly aware of the advantages for them if the plan is carried out.

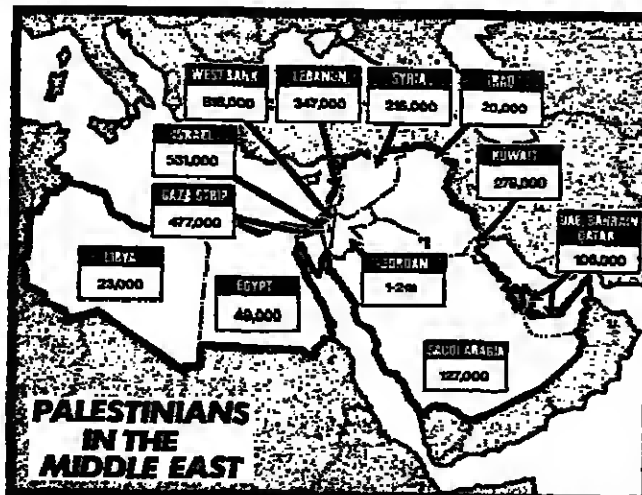
However, they also know that it has been rejected out of hand by Israeli Prime Minister Menachem Begin. The number of settlers on the West Bank is being increased, Washington is unable to put pressure on the Israeli Government to make concessions.

This week, however, the PLO must decide its future course of action. Today the Palestine National Council, the 350-member PLO parliament and highest policy making body, meets in high divided between those who believe that they must make very serious compromises in order to pursue negotiations under the Reagan plan, and those who see no choice but to stick to the full demand for a Palestinian state.

The Americans want more concessions from the Palestinians without trying to put pressure on the Israelis," said one Palestinian on his way to Algiers last week.

Yasser Arafat, the chairman of the PLO, will try to ensure that the PNC does not completely reject the Reagan plan. Whatever his doubts about its practicality, Washington's proposals do at least give him the opportunity for diplomatic manoeuvres aimed at leveraging the U.S. away from its alliance with Israel.

Since Mr Arafat knows he has no military option against the Israelis, President Reagan's plan is his only hope. "The Americans hold 80 per cent of the cards in their hand," says one Arab diplomat. "The ques-



Martyr Barnes

tion is, do they want to play them?"

A few months ago there was greater optimism among Palestinians that Washington would apply heavy pressure on Israel. The summit of Arab states held at Fez in Morocco in September had responded with some warmth to the Reagan plan. King Hussein, the key to its success, described it as the most courageous and positive American initiative since 1956 when President Eisenhower ordered the Israelis out of Sinai.

The problem is that the White House is enjoying no such success in getting Mr Begin to pull back from Lebanon, a critical precondition for the Reagan plan. Talks between Israel and the Lebanese Government are getting nowhere. Israeli troops are still around Beirut and in south Lebanon. The balanced withdrawal of all foreign forces, including the 30,000 Syrian soldiers and 7,000 PLO still in Lebanon, will have to wait.

"The Israelis have produced a long laundry list of demands for the Lebanese," comments one diplomat in Beirut. "Jerusalem would like to see a 100-page peace treaty. The Lebanese would prefer something on the back of an envelope."

More critically by keeping its withdrawal from Lebanon as the central issue in Middle East politics, the Israeli Government can prevent discussion focusing in an Israeli withdrawal from the West Bank. "There is a psychological and organic

connection between an Israeli pullout from Lebanon and the peace plan for the West Bank," says one observer close to the negotiations.

The psychological link is that nobody in the Middle East will be able to believe that America can get the Reagan plan accepted if it cannot persuade the Israelis to remove their troops from Lebanon. After all, they have held the West Bank and Gaza since 1967 and southern Lebanon for only eight months. The longer Mr Begin can divert attention from the West Bank, the less the credibility of the peace plan and the closer Washington gets to the next presidential election. This, it is assumed, will hurt President Reagan's ability to undertake any determined initiative in the Middle East.

The Syrians, who still hold one-third of Lebanon, are convinced that the Israelis will stay. Indeed, over the past month they have expressed anxiety that Israel will try to throw them out of the positions in Lebanon they still hold. The departure of General Ariel Sharon from the Israeli Defence Ministry may reduce their fears but they have repaired links with the Soviet Union and are pressing the Palestinians to reject the Reagan plan and end the Israeli occupation.

Mr Abdul Halim Khaddam, the Syrian Foreign Minister, has said that Israel demands for military surveillance posts in southern Lebanon to be left



Mr Arafat: lack of options

behind after a pull-out are completely unacceptable to Damascus. The Syrian Government believes that all Mr Arafat's delicate diplomatic manoeuvres are futile. Indeed, it would like to see him removed from his present commanding position in the PLO.

They particularly object to Mr Arafat's talks with King Hussein of Jordan with whom Syrian President Hafez al-Assad has particularly bad relations at the moment.

In any negotiations with Israel and the U.S. Jordan will play a critical role. Mr Arafat's central aim is to allow King Hussein to talk for the Palestinians without compromising the PLO's leadership. The more radical groups within the PLO, including sections of the main organisation al Fatah, believe that Mr Arafat may be selling their political birthright without any assurance that he will get anything in return.

Over the past two months Mr Arafat probably has not had a majority for his moderate stance within any of the policy-making bodies inside the PLO. Opposition to his tactics is likely to crystallise in Algiers where his opponents will try to rein him in and get the Council to condemn the Reagan peace plan. But even they for the most part believe that he is irreplaceable. The geographic fragmentation of the PLO has made his leadership all the more crucial in keeping the organisation together.

The weakness of the case put forward by Mr Arafat's critics is that the Palestinians have few alternatives except to hope that the Reagan peace plan can be implemented in some form.

Israel's military position is impregnable. The Arab states which back the Palestinians have never been so divided or weak. The Gulf states are more worried by Ayatollah Khomeini than they are by Mr Begin. Egypt, the most powerful Arab state, is linked to Israel by the Camp David treaty. The PLO still recalls bitterly that during the long siege of Beirut all its allies in the Arab world, radical and conservative alike, stood by and watched.

Above all the Israelis have stepped up their drive to settle the West Bank. Only last week another 45,000 acres of land was expropriated by the Israeli authorities near the southern city of Hebron. The West Bankers, who are closely linked to the Palestinians in Jordan, are eager, almost desperate to get the settlement programme stopped.

In Lebanon, the Palestinians face an equally ominous future. Disarmed and often unprotected, they are at the mercy of the resurgent Christian militias who carried out last September's massacre in Beirut, fear

It is unlikely the PLO will completely reject Reagan's plan

and frustration are building up in all parts of the city.

Renewed massacres cannot be ruled out. On 11st weekend a car bomb outside the Palestine Research Centre, an academic institute in Beirut, left almost 150 people dead and wounded, most mere passers-by, terribly burned by the explosion of a bottle of hexogene gas attached to the bomb. With these imminent threats of expropriation on the West Bank and death or expulsion in Lebanon, it seems unlikely that the Palestinians in Algiers will completely reject the Reagan plan. Mr Arafat will probably be able to continue his diplomatic manoeuvres. But neither radicals nor moderates in the PLO have any great hopes that they will gain much from negotiations.

Lombard

A shake-out half behind us

By Nicholas Colchester

THERE IS some good news lurking among the data and charts of the OECD's latest economic analysis of the British economy, though it is not news to which the authors draw attention. This is the remarkable shift in the pattern of British employment away from manufacturing industry and towards the service sector.

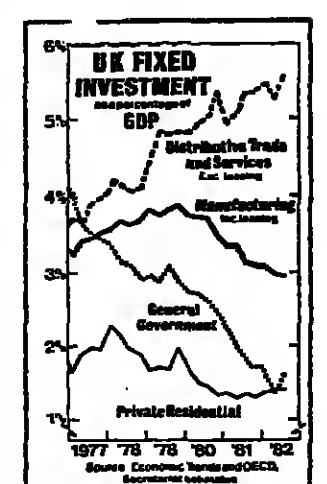
The words "post industrial society" stick in the gut when conditions in the labour market are as tough as they are at the moment. How can one stack a hazy vision of non-industrial jobs against the reality of 3m unemployed? When the short-term prospects for the UK economy are said to be 14 per cent unemployment, no further progress against inflation, and a deteriorating balance of payments, it seems natural to join with the OECD in frowning at the "considerable contraction" of the British industrial base.

Yet a suspicion remains that the rigour imposed upon the British economy by what Denis Healey, the shadow Foreign Secretary, called "sado-monetarism," and by our late petro-sterling exchange rate, has goaded the British economy—perhaps too early and perhaps too fast—down a path which all the mature industrial economies will at some stage have to follow.

Where 100 people were employed in the UK service sector in 1960 there are 125 working today. And where 100 were working in manufacturing industry in 1960 only about 70 are working today.

Manufacturing now accounts for only 27 per cent of British employment and in its painful shedding of industrial labour Britain seems to have moved far faster than the other major European economies: taken together these other countries are today employing the same number of people in industry as they were 24 years ago. My instinct is that these European partners—and in particular West Germany and Belgium—still have to face up to a bitter process which Britain is already half way through.

Indeed, one has to concede a danger that these European neighbours will become increasingly protectionist to defer the painful process of adjustment. This would hinder the UK from



shifting its foreign currency earnings away from basic industrial exports.

To argue long term advantage in a declining industrial proportion of employment and GNP is not to imply that manufacturing industry is dispensable. Services, whether exportable or not, need to be based upon a sound and competitive industry which itself employs more capital and technology and be more selective in its output to add the necessary value per employee. Redundancies and re-employments not only propel people towards new and unforeseeable types of work, they also preserve the viability of parts of the existing manufacturing base.

So, though there is hope behind the pain of British industry's shake-out, the message in the chart remains disturbing. Service sector investment is surging ahead appropriately as a proportion of GDP, but manufacturing investment seems to have fallen at a disproportionate rate of late. Meanwhile, the record for government investment, to the extent that it reflects spending on the infrastructure of the British economy, looks catastrophic. The falling line of public investment—in its abject failure to compensate for the general fall of private sector investment—shows most graphically where this Government's economic courage has been marred by short-sightedness.

Letters to the Editor

The Chancellor proposes and the Revenue disposes

From Mr P. Wilson.
Sir—I was glad to read Mr Sadler's letter (February 8) which drew attention to the not very well publicised consultative document issued by the Inland Revenue on the tax treatment of deep discounted bond issues.

While making no comment on the detail of the proposals it seems ironic in principle for the Chancellor to seek to facilitate such issues and then for the Inland Revenue to propose to tax the same issues in a way and to an extent which will remove any potential advantages they may offer to issuers and investors. It is important,

if such issues are to constitute successful finance raising vehicles, for them to appeal to both borrowers and investors. The Chancellor's original announcement was one of a series of measures designed to assist control of the money supply in the face of increased bank lending. It was made at a time when the Government's appetite for borrowing was less than in previous years. In some respects therefore the scene appeared set for such issues to be attractive. An uncertain interest rate climate, however, an inability to see the end of the economic downturn and investors' fears of a continuing

high rate of corporate failure has meant the market in domestic bonds of all kinds remains moribund. If the domestic market is to revive and if deep discount issues are to figure in the revival, it is essential that the tax position of investors is certainly no worse than if they invested in gilts and ideally should be better (perhaps for example by being free of capital gains tax from the date of acquisition). It would be unfortunate therefore if the Chancellor's initiative should be hampered by the Inland Revenue's retrospective short-sightedness. P. G. Wilson, 40 Chancery Lane, WC2.

Reducing the voltage

From Mr P. Vaincourt-Strallen.
Sir,—It was with some amusement tinged with disbelief that I read (February 3) the report from Washington by Anatole Kaletsky that the Council of Economic Advisers to President Reagan in its 1983 annual report has belatedly stumbled upon the fact that the 1982 recession could be blamed on the unprecedented end as yet "not fully understood" changes in the relationship called "velocity" which links the money supply with the growth in nominal GDP.

Any striking water worker could explain to the Council of Economic Advisers that given a constant pressure, the volume of water delivered at the end of a pipe depends upon the diameter of the pipe which in turn dictates the velocity of water passing through it. Conversely, if the diameter of the pipe remains constant the volume of water delivered varies with the pressure. Any fifth form schoolboy could explain that volts (pressure) times amps (current flow) equals watts (the quantity of electricity).

The monetary authorities in the U.S. and, until recently, in the U.K. have been at pains to reduce the pressure of money (money supply) without any means of measuring its velocity of circulation and hence of the total quantity of money at work in the system. Velocity of circulation can only be roughly measured with considerable hindsight but it should be self evident that when money is being hoarded because of high rates of interest and fears of unemployment, the velocity of circulation is likely to fall.

Governments on both sides of the Atlantic have succeeded in dimming the economic lights by reducing the voltage at a time when the public was already reducing the impedance by changing its 100 watt bulbs for 60 watts to save electricity.

The Council of Economic Advisers has belatedly grasped this simple truth, hopefully before the world is plunged into total darkness.

Perhaps a moral to be drawn is that more water workers should be economic advisers and vice versa.

P. D. Vaincourt-Strallen, Dial House, Cotcott, Somerset.

Zero rating for roof repairs

From Mr A. Galea.
Sir,—As I understand it a well-to-do householder's property improvement in the shape of a swimming pool is VAT-free, while a retired pensioner's necessary repair of a leaking roof is surcharged 15 per cent by Government. By zero-rating all building repair work the Chancellor could right this inequity, eliminate time consuming arguments with Customs over what is an "improvement" and a "repair," and give a boost to small businesses.

Alexander P. Galea, 29a, Boy's Hill Road, Maidenhead, Berks.

A picture of inflation

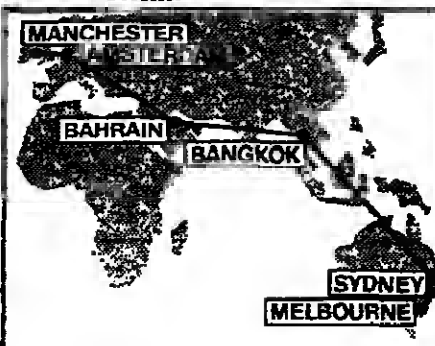
From Mr J. de Rivecourt.
Sir,—Every time the FT Index rises to an apparent all-time high, there is much comment in the financial Press about a coming fall, and share values are talked down. In terms of real value, however, both the FT 100 share index and the FT all share index have not been on an all time high for quite some years.

You publish an inflation

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GNP INCREASES 1.5% IN YEAR

French expansion lifts imports

BY DAVID HOUSEGO IN PARIS

THE EXPANSION of the French economy last year, at a faster rate than that of most of its competitors, was accompanied by a sharp rise in imports.

That was confirmed at the end of last week with the release of preliminary figures that showed that French gross national product (GNP) grew in real terms in 1982 by 1.5 per cent as compared with a fall in West German GNP of 1.2 per cent.

The difference in rates - the two countries are each other's main trading partners - largely accounts for the 3.8 per cent growth in French imports in volume terms. French demand, rising more sharply than that in West Germany, benefited West German and other foreign manufacturers most, thus

plunging France's trade deficit deeper into the red. The 1.5 per cent expansion in economic activity last year was largely the result of the stimulatory measures the Socialist administration took shortly after coming to power and followed 0.3 per cent growth in 1981.

In mid-year, the devaluation of the franc was accompanied by a deflationary package which produced negative growth in the third quarter.

But the preliminary figures issued show that consumer purchasing power was still sufficiently strong to result in a 0.7 per cent growth in the final quarter over the previous three months.

For the Government, the most

beating news in the figures is that exports fell by only 2 per cent in volume terms over the year, as a result of a strong revival in the last quarter of 2.7 per cent.

In the autumn, the government statistics institute INSEE had been forecasting a record decline in exports in volume terms for the year of between 4-5 per cent.

The right-wing paper *Le Quotidien* has published extensive extracts from allegedly confidential government documents which showed that the Ministry of the Budget was now assuming in its forecasts a 0.7 per cent drop in purchasing power this year.

The Budget Ministry described

the figure as "haseless," but a decline in purchasing power would accord with the plans being drawn up

within the administration to diminish the size of the trade deficit. These plans, which have become politically explosive as a result of election campaigning for next month's municipal polls, are expected to be implemented when the election is out of the way.

The Government had been working in its Budget forecasts on a 2 per cent growth this year in real GNP and 0.9 per cent growth in real disposable income.

The allegedly revised forecasts published in *Le Quotidien* assume a 1 per cent growth in GNP and a 0.7 per cent decline in purchasing power.

Officials insist that, after last year's experience, France cannot afford to run a growth rate higher than that of her competitors

Bignone faces growing crisis

By Jimmy Burns in Buenos Aires

ARGENTINA'S moderate President, General Reynaldo Bignone, is facing his most serious crisis since assuming power last June. There have been reports during the weekend of deep-seated unrest within the armed forces, an imminent government reshuffle and a bitter clash between the junta and the politicians.

The junta of army, navy, and air force chiefs is understood to have drawn up a package of tough economic and political guidelines, which it wants General Bignone to implement.

The guidelines will be put to the president at a crucial meeting scheduled for today following talks between the individual service chiefs and their senior officers.

They are believed to include strict instructions on the handling of the election timetable as well as a demand for economic measures to deal with the rising inflation rate and the unions' threat of a major strike. Consumer prices increased by 16 per cent, five percentage points higher than the government's target.

General Bignone is having his conciliatory attitude towards the politicians undermined by the junta's insistence that the election date should be fixed for early November without further consultation with the parties. The junta is also reported to be considering the new press law to clamp down on anti-military reports in the media.

President Bignone, who until now has tried to maintain a distance from the junta, is said to favour taking into account the opinions of the politicians who have asked for a much earlier poll.

The junta's privately voiced criticism of the government's anti-inflation drive has put in doubt the future of Sr Jorge Wehbe, the economy minister. General Llamas Reston, the interior minister for contacts with the politicians, is also being threatened.

Some political observers have suggested that General Bignone might himself resign rather than yield to military pressure.

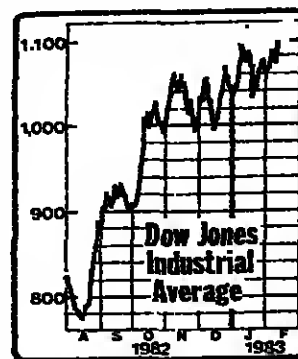
Details of a strong attack on the current military leadership by a group of senior retired officers were leaked at the weekend.

A statement, reported to have been handed to the junta on January 29, accuses the presidency of "having lost control" to "Marxist Peronist forces" bent on undermining the prestige of the armed forces.

It called on the junta to "modify substantially the political leadership" or else face a "tragedy of unfathomable consequences." The statement, whose signatories include General Federico Montero, a notorious coup-monger purged by president Juan Carlos Onganía in 1969, was significantly published prominently on the front page of the pro-army newspaper, *La Razón*.

THE LEX COLUMN

Blind faith on Wall Street



at a time when the Fed's independence remains an acutely sensitive issue in Washington, requiring it to take note of the political pressures to refloat. It adds up to a demand for Mr Paul Volcker when he addresses the Senate banking committee on Wednesday.

The Fed chairman referred publicly to the test of faith required of the bond market when he last appeared in a Capitol Hill earlier this month to comment on the U.S. Budget. Unless Wall Street believes in a stable recovery, as he pointed out, arbitrary reductions in the discount rate could just be counterproductive, scaring the bond market with visions of rolling printing presses to fund the budget deficit and producing even higher long-term rates.

This still seems an unlikely course of events. The producer price index actually fell 1 per cent in January. In this kind of environment, even stable bond prices imply rising real interest rates and hence ought surely to be sufficient to lower in these circumstances for bonds to rally, given further discount cuts.

On the other hand, the government bond market in the last few weeks has repeatedly broadcast its distrust of the Fed's new approach. Following the discount rate's cuts from 9½ to 8½ per cent, the long bond yield gained 50 basis points. There are many who see temporarily higher short-term rates as a necessary indicator of some monetary restraint and as a prerequisite therefore for any renewed rally in bond prices.

A reduction in the budget deficit could surely serve up the same reassurance, though, and action on the deficit would certainly be the most generally acceptable background against which to introduce lower short-term rates.

Investors in equities have been put to a slightly different test of faith and their belief in an enduring economic recovery continues to hold. It has kept the bull market on its feet, despite budget deficits, recurring anxieties over the international banking system and Opec and a blizzard of adverse technical comment every time the Dow Jones industrial average has dared approach the 1100 level. However, those worries have kept the market in a nervous state. While bond prices have lost much of their earlier volatility, it has not been uncommon for the industrial average to move 20 points or more during a single session, as it did again on Friday.

Traditional indications of a well advanced rally are thick on the ground, as well they might be after the five month rise in the industrial average which lifted it 4.5 per cent to the January peak. The sector-by-sector rotation of buying pressure has now taken up almost all of the major stock groups and a brave optimism has had investors diving deep into the barrel this year. The Nasdaq index of shares traded over the counter climbed 8.3 per cent in the first five weeks, nearly three times the Dow's advance, while on the Big Board itself, some colourful cheap stocks have been regular fixtures on the most active list.

Confidence

Predictions of a major correction still abound, therefore. But a full-blown economic statistics have pointed to solid growth in the first quarter, not least in Detroit, and share prices reflect confidence that it can be sustained. Companies' first-quarter operating results by this token will not be so readily excused the non-operating gains and losses which have delayed the 1982 reporting season in recent weeks.

These have sprung, inter alia, from stock-for-bond exchanges, changed depreciation and tax loss laws and major asset disposals, as well as the novel blessing of life profits in a disinflationary climate. Comparing some companies' results from one year to the next has made even the monetary aggregates look reasonably straightforward. Investors have remained constant through it all - but it could soon be high time for a miracle or two from the U.S. economy.

Japanese to create fewer jobs in UK

By Jason Crisp in London

THE NUMBER of jobs which will be created in the UK by new Japanese investment projects announced last year plummeted in spite of the widening trade gap between the two countries.

According to a report to be published shortly by the Department of Industry's Invest in Britain Bureau (IBB) only two Japanese manufacturing projects were committed to the UK last year which are expected to create 155 jobs.

In the previous two years 2,400 jobs were created by Japanese investment in manufacturing in the UK. This is far outstripped by new investment from U.S.-owned companies which last year decided to create projects which will need over 8,000 employees.

There are 26 Japanese companies manufacturing in the UK, most of which employ fewer than 100 people. Last year two of the largest YKK, which makes zip fasteners, and Sony, expanded their UK operations.

The British Government has been making considerable efforts to persuade Japanese companies to invest in the UK. Last month Mr Patrick Jenkin, the Industry Secretary, visited Japan to encourage more companies to manufacture in the UK.

Considerable publicity was given to three announcements which were timed to coincide with Mr Jenkin's visit although they will create only 400 jobs over several years. The three were Hitachi-Maxell to make video tape and Sanyo and Mitsubishi to assemble video recorders.

Fujitsu, which makes lifts and escalators, and Honda which has links with BL the state-owned vehicle maker, also announced they were studying the possibility of manufacturing in the UK.

Japanese in Europe, Page 4

Poland's national income falls 8% in year, but output is rising

BY DAVID BUCHAN IN WARSAW

POLAND'S national income fell 8 per cent last year below the 1981 level, according to final statistics published in Warsaw. This brings the overall slump in the country's national income, roughly corresponding to gross national product excluding services, to 25 per cent since 1979.

But industrial production ended last year only 2 per cent below the 1981 level, and on a rising trend since last August. Official press reports say that the increase in last month's industrial output, was higher than the 4 per cent rise forecast for 1983 as a whole, mainly because of improvements in the mining and building sectors.

Poland has recently been seeking a three-year rescheduling package of its Western debts, falling due in 1983-1985, as distinct from the annual agreement it has painfully negotiated in each of the past two years.

Western governments have fo-

zen rescheduling of debts as part of their sanctions, a position that has come to suit Poland because it effectively excludes it paying current interest.

National income last year fell faster than industrial output, because of poor performance in agriculture, construction transport and the failure of exports to the West to rise as fast as imports fell, government economists say.

A 3.3 per cent decline in grain production and a 5.8 per cent drop in meat production resulted in an average 4.5 per cent drop to the farm sector. The brake put on some 1,500 investment projects and a fall in new apartment building produced a 5.7 per cent drop in the construction sector.

Meanwhile, a shake-up in the top management of Bank Handlowy, the foreign trade bank which handles Poland's debt negotiations with Western banks, is expected very shortly.

This would involve the replacement of Mr Stanislaw Kobak, who became the bank president last June when new financial reforms were introduced and possibly of the veteran bank vice president Mr Jan Wolosyn.

The latter has been known to want to retire for some time, but has been persuaded to stay on so far because of his much needed financial expertise and good personal links with many Western bankers.

In his first public pronouncement since being made a Cardinal in Rome Archbishop Jozef Glemp, yesterday rejected complaints that he was not militant or politically decisive enough.

He said in a sermon that his job as leader of the Polish church was to look to the long-term interests of the church and nation, and to stick to the church's traditional conciliatory role, even though that "might not be popular today."

Britain builds minerals stockpile

Continued from Page 1

Government to go ahead with the idea alone, instead of waiting for the EEC to develop a common policy.

The Department of Industry has confirmed that the whole question of creating strategic materials stockpiles was being looked into, but that it would require co-ordination with other Ministries such as Treasury and Defence.

It is thought, however, that an official announcement may be made this week, in answer to a question in the House of Commons, tabled by Mr Trevor Skeet, a Conservative MP.

The secrecy surrounding the buying programme, which is thought to have been nearly completed, was to prevent prices being pushed up by the knowledge that the UK Government was in the market.

Prices of most metals and miner-

als have been at rock bottom levels during the past few years because of depressed demand. But they have started rising recently on hopes of an industrial recovery, so the UK buying has come just in time.

There is considerable unrest in the trade about the way the programme has been organised. It is understood that the British Steel Corporation, which will be the main user of the materials bought, is upset by the implied snub in the Government's decision to appoint a French-owned company, Brandeis Instel, to co-ordinate the buying programme.

Brandeis Instel is an established London-based metals trading company that was taken over by the nationalised French group - Pechiney Ugine Kuhlmann - last year when merchant bankers, S. G. Warburg,

decided to sell out because of the growing financial commitment required.

Other London traders are also astonished that the subsidiary of a nationalised French group be employed by the UK Government for such a sensitive role.

France already has a strategic minerals set-up, linked with its ownership of mining companies. An attempt by West Germany to increase its stocks to above normal levels, by giving low-cost land to private companies, failed to attract much support.

Japan has already stockpiled several key materials and is planning to buy more. The Reagan Administration is pledged to increase the size and scope of its large strategic stockpile to meet the target of having sufficient supplies for a three-year conventional war.

PLO turns down U.S. peace plan

By Roger Matthews

THE LEADERSHIP of the Palestine Liberation Organisation has rejected President Reagan's peace proposals for the Middle East, one of the top PLO officials said last night.

Mr Abu Iyad, widely considered as deputy to Mr Yassir Arafat, the PLO chairman, said in Algiers that the Reagan plan had been turned down because it did not provide for a Palestinian state.

He was speaking on the eve of today's scheduled meeting of the Palestine National Council (PNC), the top Palestinian policy-making body, which is due to consider strategy for achieving a Middle East peace settlement.

The PNC will be discussing both President Reagan's September 1 proposals and the eight points agreed on by the subsequent Arab League summit meeting in Fez which implicitly appeared to recognise Israel's right to exist.

The executive committee of the PLO has been meeting under the chairmanship of Mr Arafat for the past five days.

Mr Arafat, who is hoping that the PNC will still leave him some negotiating flexibility, is anxious to avoid damaging splits between the different factions that make up the PLO. Some factions had earlier totally rejected the Reagan plan.

Mr Reagan favours Palestinian self-determination being expressed through association with Jordan. Mr Arafat and King Hussein of Jordan have held several rounds of talks to discuss how this idea might be carried forward.

Harder choices, Page 15

Peking's farewell to a dog of a year

BY TONY WALKER IN PEKING

HUNDREDS of millions of Chinese at the weekend saw out the year of the dog and ushered in the bountiful pig with fireworks and theatrical displays and feasting.

For businessmen in the West who may have regarded 1982 as a dog of a year, the new year may bring better news if the ascendant pig in the Chinese lunar calendar is allowed to exert a positive influence on events beyond the middle kingdom.

According to Chinese mythology the pig in the ascendant corresponds with years of plenty. Harvests are bountiful and bank accounts get fatter under the benign influence of the lunar pig.

Western businessmen who may not feel disposed to put too much faith in such forecasts should perhaps recognise that the Chinese have been longer in the business of predicting events than those who

practise the imperfect science of econometrics.

In China, the new year got off to a robust start. In Peking and other major cities shops reported record business and "new rich" consumers in rural areas are said to have gone on a spending spree after the record 1982 harvest.

Zhao Ziyang, China's Premier, at what was billed as a spring festival "get together" at the Great Hall of the People, urged people to work harder in the new year to "ensure the success of major construction projects to prepare conditions for future development."

Chinese, in their new affluence, set off barrages of fireworks to welcome the new year of the pig and to say goodbye to the dog. In Peking, it sounded as if the city was under siege as fireworks, some of quite lethal dimensions, were detonated from nightfall on new year's eve un-

til dawn the following day.

Street markets and festival in the capital's suburbs today took on some of the characteristics of minefields as exuberant young Chinese set off firecrackers, several varieties of which hopped and jumped in alarming fashion.

It is at times like this that foreign residents in China need a reminding that it was the Chinese who invented gunpowder between the 10th and 13th centuries. In Peking alone, the local fireworks factory, quietly called the Beijing Daily Sundries Corporation, made 800 million "single-shot" and 10 million "double-bang" firecrackers, according to a China Daily report.

Turning arms and ammunition into civil production as the Chinese proverb goes is always the wish of the Chinese people. A corporation spokesman said: "Using gunpowder to produce goods celebrating a

peaceful life is much more worthwhile than igniting a war."

After the festivities of the past several days it is reasonable to assume Chinese gunpowder stocks have been much depleted.

According to Chinese mythology, years of the pig are benign for those born in the years of the rabbit, sheep, tiger, ox, rat, dragon, horse, rooster and dog. The year is not so auspicious for the snake and monkey.

There are 12 signs in the Chinese lunar calendar, beginning with the rat in the present cycle, then the ox, tiger, rabbit, dragon, snake, horse, sheep, monkey, rooster, dog and last, but not means least, the pig. The years of the Chinese lunar calendar do not, of course, exactly coincide with those of the Western calendar. The Chinese lunar new year begins in either January or February - usually February.

Sharon stays in Cabinet

Continued from Page 1

expected turmoil over approval of Gen Sharon's new appointment, a number of small parties have tabled motions of no confidence in the Government, which will be debated in the coming days.

Meanwhile, the Peace Now movement maintained vigil in Jerusalem and Tel Aviv in memory of the anti-Sharon demonstrator who was killed by a hand grenade thrown at a demonstration outside the Prime Minister's office last Thursday night.

So far the police have failed to arrest anyone for the fatal attack, which is widely believed to have been the work of right-wing Israeli

extremists who opposed the resignation of the Defence Minister.

Our foreign affairs staff writes: The United Nations agency responsible for Palestinian refugees said yesterday that 15 bodies had been found in south Lebanon. It said the bodies had been discovered over the past two weeks near Ein el-Hilweh refugee camp, outside Sidon, an area under Israeli occupation.

The report added that Palestinians were being intimidated by Christian militiamen and cited examples of families which had been forced to leave their homes after receiving threats.

Bovis country.

The Bovis Fee System.

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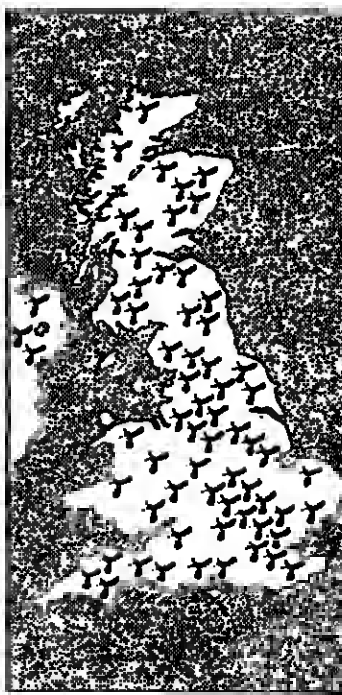
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SECTION II - COMPANIES AND MARKETS

FINANCIAL TIMES

Monday February 14 1983

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INTERNATIONAL BONDS

Market stages mini-rally over U.S. inflation hopes

By Alan Friedman in London

THE EURODOLLAR bond market staged a mini-rally on Friday, the first truly encouraging day in three weeks. A 1 per cent drop in the U.S. producer price index (far greater than expected) suggested a declining inflation rate and spurred Euro-bond dealers into action. Prices of many bonds were marked by 1/4, 1/2 and even a whole point higher.

Europe is buzzing once again with hopes of a cut in the Federal Reserve Board's discount rate, and new issue managers were so emboldened by these hopes on Friday that they began speaking of a new issue "winddown" opening this week. Some of London's less enthusiastic bankers warned, however, that before the market gets carried away with itself it will have to place the substantial overhang of new issues. "We still have plenty of inven-

ories for the dealers to liquidate," said one banker.

Credit Suisse First Boston's Hans-Joerg Radloff was not among the optimists. He predicted on Friday that the market would "contract in a major way compared to last year". His argument is that much of Europe's bond buying power has been exhausted for the time being.

Other bankers point out that even if interest rates do decline, they are not confident that the decline will reach significant proportions in the near future. They also note that as the world's equity markets plough ahead, they will compete with bonds for the hearts and purses of investors.

Strong equity markets could provide competition, but they could also save the Eurobond market's ba-

con by providing an opening for a greater number of equity-linked bond instruments - namely convertible bond issues.

The Euro D-Mark bond market, like its dollar counterpart, also staged a recovery on Friday, which was lucky for SNCF, the French railway authority. Commerzbank launched the DM 100m SNCF issue, which bears a 7 1/4 per cent coupon over 10 years. The initial reception was encouraging.

Today sees the launch of a DM 100m issue for the City of Oslo through Deutsche Bank, and bankers in Frankfurt expect a coupon of around 7 1/4 per cent, depending on the maturity.

Switzerland appears to be suffering from its own case of indigestion: too many issues in too short a period of time.

Hoyos starts a guessing game

By Our Euromarkets Staff

THE MOST talked about subject in the Eurobond market last week was the sudden resignation of Herr Friedrich Hoyos, one of Deutsche Bank's top Eurobond executives. The market's rumour mills started churning immediately, with any number of theories being advanced as to why Herr Hoyos, who has worked there for the past 15 years, should want to leave Deutsche Bank, an institution which last year led nearly \$5bn worth of new Eurobond issues.

On Friday evening Dr Wilfried Guth, one of the two spokesmen of Deutsche Bank's executive board, said Herr Hoyos "leaves the bank with our full agreement for reasons of health for either six or nine months." Dr Guth went on to say: "Whether or not Herr Hoyos comes back is open."

Dr Guth's only other comment was that the resignation had nothing to do with such questions as the bank's Eurobond strategy or its decision-making process.

There were those in Frankfurt who maintained on Friday, however, that the departure of Herr Hoyos - by all accounts one of Deutsche Bank's most able and hard-working executives - could not be explained by ill health alone.

There has long been speculation that the bank might establish a major London bond market presence - a matter that is known to have been debated repeatedly within Deutsche Bank management. Yet this issue does not explain Herr Hoyos' decision either.

According to Frankfurt bankers, some members of the Deutsche Bank Eurobond team have become demoralised by the bank's internal decision-making procedures.

INTERNATIONAL CREDITS

Yugoslavia's deal moves slowly

By Peter Montagnon, Euromarkets Correspondent, in London

YUGOSLAVIA's commercial bank creditors are working hard to have their part of the country's \$4.5bn debt rescue package ready at least in principle for a new deadline of February 28 which has been imposed by the International Monetary Fund (IMF).

Leading creditor banks meeting in Paris last week thrashed out a draft scheme to provide Yugoslavia with just under \$2bn in new loans and refinancing this year.

The other parts of the package include \$1.3bn in credits from Western governments, a \$500m bridging loan from the Bank for International Settlements, \$600m in drawings from the IMF itself and a \$250m loan from the World Bank.

The bank's portion of the package will be put to a wider group of commercial bank creditors this week, and a further meeting of the 15-year co-ordinating group is expected to study their response within two weeks.

But even if these responses are favourable, bankers now say it will be well into the second quarter before the package can be signed and the money handed over to Yugoslavia. This means the present 90-day standstill on repayments of principal by Yugoslavia will almost certainly have to be extended after it expires on March 31.

The commercial banks' share in Yugoslavia's rescue plan is intricately bound up with other slow-moving portions of the package. Precise amounts of new loans, as opposed to refinancing, will depend in particular on the final shape of the Western governments' share of the deal.

Several governments have been resisting the idea of providing Yugoslavia with cash loans, and would prefer to offer it export credits instead. It is also uncertain how far governments are willing to extend maturities on existing export credits coming up for repayment this year.

Like cash loans, such extensions would have a positive effect on Yugoslavia's cash flow, and this would

reduce the country's need for new loans from commercial banks, although the refinancing portion of the package would increase because some of the bank loans maturing this year are export credit loans guaranteed by Western governments.

Even when problems such as these have been ironed out, the banks face some potentially tough bargaining with Yugoslavia over their insistence that its National Bank guarantees the refinancing and new loans.

The country's central bank has always resisted this suggestion because of constitutional difficulties resulting from Yugoslavia's federal structure, yet the banks are adamant.

"They will have to be able to do that," one Western participant at last week's talks said of the Yugoslavs.

The refinancing itself is expected to be for five years with a grace period of at least two years before any repayments begin, but until it is in place commercial bankers acknowledge that Yugoslavia will need an injection of cash to be able to meet interest payments on its \$10bn foreign debt and reduce outstanding arrears.

This is supposed to come from the \$500m bridging loan being prepared by the Bank for International Settlements, which has been delayed because of problems with collateral.

The BIS wants Yugoslavia to pledge its gold reserves to cover \$200m of the loan, but this is proving difficult because of "negative pledge" clauses in existing loan agreements between Yugoslavia and commercial banks that prevent preferential treatment being given to the BIS in this way.

Yugoslavia has begun to ask commercial banks to waive these negative pledge clauses. Bankers say the request is being treated "sympathetically."

Despite their optimism on Friday night, bankers attending the Paris meeting pointed out that the entire

package remains highly complex. Lack of centralised control makes the temptation for some banks to negotiate separate side agreements with individual Yugoslav borrowers very strong.

This is reported to have happened already in a number of cases and, as a result, the Paris meeting drafted a memorandum to be signed by creditor banks which will pledge them to respect the payments standstill and not to seek repayment from individual borrowers.

Under pressure from the Finance Ministry in Tokyo, Japanese banks, which used to take up to half of every individual credit, have now reduced their share to around one-third.

This is bound to put further upward pressure on margins, the argument goes, although the other side of the coin is that some of the latest deals have shown a very positive response at lead manager level, including the latest \$1bn credit for Indonesia, which by Friday had attracted 23 firm commitments from lead managers.

Those who view the market more optimistically claim that this response is in itself an indication of the changing structure of the syndicated loan market.

In the present difficult climate, the underwriting commitment on large deals is being shared out among a much larger number of lead managers, some of which are medium-sized banks that would previously have entered jumbo credits at the second-tier "manager" level.

With fewer banks opting in at this level a false impression of poor market sell-down is being created.

Either way round there is no denying that the market has become much more selective. Some banks have made a policy decision to stay away from sovereign lending which might not be reversed even by higher margins.

An even better test of the mood will come with deals for Mediterranean countries.

There is always the risk that the market could be further destabilised by new shocks from Latin America. Yet for the time being last week's news from this quarter was generally positive.

Brazil has made further progress in its efforts to restore short-term credit lines to foreign banks abroad, while Mexico is understood to have made a firm commitment to provide foreign exchange to cover principal repayments of private sector borrowers who agree to restructure their debt along approved lines.

International Capital Markets Review

Elsewhere, bankers are mulling over the performance of the jumbo credits now being digested by the Eurocredit market in an effort to gauge whether margins will hold steady at the new levels established by such borrowers as Sweden and Denmark, or whether they will have to move higher still.

Several bankers suggested on Friday that Denmark's \$1.3bn credit, which attracted a lot of support at lead manager level, had met with a disappointing response in syndication.

Sales of the loan in the market amounted to \$311m, of which \$143m came from Japanese banks and \$168m from elsewhere, with a markedly poor response from banks in continental Europe and very limited interest from U.S. regional banks.

Realists argue this shows that smaller participants in the market remain unwilling to enter new deals. Besides the lack of interest from French, most German and many U.S. regional banks, they are also worried about the declining share of Japanese banks in new Eurocredit deals.

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Air. life years	Coupon %	Price	Lead Manager	Offer yield %
U.S. DOLLARS							
Nitin, Telecom \$1	50	1988	15	7	100	Morgan Stanley, Paribas	7.008
D-MARKS							
SNCF \$	100	1993	9 1/2	7 1/4	100	Commerzbank	7.875
SWISS FRANCES							
Mitsubishi Electric ** \$1	150	1988	5	3 1/4	100	UBS	3.500
Town Securities Corp. ** \$1	20	1988	5	4 1/4	100	Banco del Sottanto	4.250
Manitoba Prov. \$	100	1993	18	5 1/4	100	UBS	5.250
Denmark ** \$	150	1988	6	5 1/4	100	UBS	5.750
Santander Nuala ** \$	100	1988	5	5 1/4	100	SBC	5.825
Kurita Ind. ** \$	30	1988	5	4	100	CS	4.000
Wachsmann Constr. ** \$	40	1988	5	4 1/4	100	CS	-
Asahi Chemical ** \$	50	1988	5	3 1/4	100	UBS	-
Mitsui Sumitomo Kisha ** \$	100	1988	5	3 1/2	100	SBC	3.500
Mitsui Mining ** \$	40	1988	5	5 1/4	100	UBS	5.500
DB ** \$	50	1988	5	5 1/2	100	UBS	5.500
RTB	100	1993	18	-	-	CS	5.825
ECUs							
SEK \$	50	1995	12	11 1/4 %	99 1/4	Kreditbank Int.	11.270
YEN							
World Bank \$	200m	1995	10.32	8	99 1/2	Nikko Secs.	8.228

* Not yet priced. ** Fixed terms. *** Placement. 1 Floating rate note. 2 Minimum. 3 Convertible. 4 For three years. Notes: Yields are calculated on ARB basis.



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SALOMON BROTHERS INTERNATIONAL SWISS BANK CORPORATION INTERNATIONAL LIMITED

February 10, 1983

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February 1, 1983

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INTERNATIONAL CAPITAL MARKETS AND COMPANIES

U.S. BONDS

Dealers reassured despite jump in money supply

THE BIG blizzard which dumped 23 inches of snow on New York last Friday paralysed the entire city — but not before the Federal Reserve Board had reported an equally ominous \$5.9bn increase in the M1 money supply and an even more whopping \$48.1bn rise in the broader money measure, M2.

The credit markets had little chance of reacting properly to these figures since most investors and many dealers had already set out for home in the snowstorm. Yet big as the numbers were, the huge rise in M2 was within the range of \$50bn forecast a week or so ago by Mr Paul Volcker, the Fed chairman. The M1 increase, however, was larger than anticipated.

Far more reassuring were the minutes of the Federal Reserve Open Market Committee (FOMC) meeting in December, which were also released on Friday. The key market policy-making arm of the Fed agreed to continue to tolerate growth

money market deposit accounts at commercial banks, the Fed said greater growth on M2 was acceptable. It has decided to allow M2 growth of about 9 1/2 per cent at an annual rate from December to March.

The consensus on Wall Street is that the Fed, at the FOMC meeting last week, decided to continue with its more flexible approach to monetary policy and that Mr Volcker will announce no basic change in this policy on Wednesday.

Mr Philip Braverman, of Chase Manhattan, said on Friday night that despite the \$5.9bn increase in M1, Mr Volcker's Congressional testimony should be reassuring to the credit market. He believes the Fed will maintain the money growth targets unchanged rather than lowering them as it has done in the past.

The Fed has clearly become more pragmatic, and Mr Braverman expects it to ease its stance further in the next month or so.

Mr Henry Kaufman, of Salomon Brothers, also says the Fed is likely to have decided last week to encourage some easing in money rates soon, which could include a reduction in the discount rate, currently 8 1/2 per cent.

U.S. INTEREST RATES

	Week to Week	Feb 11	Feb 4
Fed Funds wtd. av.	8.50	8.50	8.50
3-month Treas. bill	8.12	8.12	8.12
3-month CB	8.65	8.65	8.65
30-year Treas. bond	11.13	11.29	11.29
AAA Utility	12.25	12.25	12.25
AA Industrial	12.00	12.00	12.00

Source: Salomon Bros. (estimates). In the week to February 2 M1 rose by \$5.9bn to \$487.8bn.

somewhat above the monetary target ranges and to maintain its current flexible approach to money supply growth.

That, coupled with another one of those inspired leaks after the Fed's supposedly top secret FOMC meeting last week, suggested that Mr Volcker is unlikely to spring any nasty surprises on Wednesday when he will lay out in detail the central bank's posture during his annual appearance before Congress to report on monetary policy.

The December FOMC Minutes showed that the Fed had maintained its market intervention policy unchanged. Fed officials were again allowed to move in a range of 6 to 10 per cent. This week they traded at an average of 8.5 per cent.

Because of the distortions to M2 from the success of the new

member of the Hong Kong Legislative Council since 1976 and was appointed to the executive council last year. She is chairman of the special committee on land supply, of the board of the Prince Philip Dental Hospital and treasurer of the Chinese University of Hong Kong.

Miss Dunn is a director of John Swire and Sons (HK), an executive director of Swire Pacific responsible for trading division companies in the Swire Group. She is also a director of the Mass Transit Railway Corporation and of the Hong Kong and Shanghai Bank.

Mr Ted M. Annenberg has been elected corporate vice-president of F. W. WOOLWORTH CO and named deputy general counsel. He was previously part of Nabisco Brands law department.

GERBER PRODUCTS CO has elected Mr Carl G. Smith as chairman and chief executive officer, succeeding Mr J. Friends, who has become chairman of the executive committee. Mr Smith, who is president and chief operating officer, will be replaced by Mr Leo D. Goulet, executive vice-president and general manager of the general merchandising division. These moves are being made in preparation for an orderly succession.

Massey-Ferguson changes U.S. marketing strategy

BY PAUL BETTS IN NEW YORK

MASSEY-FERGUSON, the financially troubled Canadian farm machinery manufacturer, has launched a new marketing and sales strategy in the U.S. agricultural equipment market based on a major reorganisation in the way it does business with its dealers.

One of the key aspects of this programme is a commitment by Massey to supply its dealers in the U.S. with all the products the market demands. That is not to say Massey will manufacture a complete range of products for its dealers. "What we have said is, we will provide a complete range but some of the products may be bought from other manufacturers," according to Mr Peter Collins, a Massey executive.

Massey is also changing its policy by dropping its previous insistence on treating all U.S. dealers alike. Instead, Massey is planning to tailor its relations with dealers to the specific needs and size of each one. The concept of telephone marketing is to be introduced

into Massey's relations with smaller dealers as a way of helping them to lower overhead costs.

These changes were explained to Massey's dealers last week, when the new marketing and sales approach was launched in Phoenix, Arizona. Massey has withdrawn from all manufacturing operations in the U.S. as part of its restructuring programme.

The Canadian company has also confirmed that it has been talking to several rival farm equipment makers, including the equally troubled International Harvester of the U.S., about possible joint ventures or other forms of collaboration.

But Massey said that no joint venture agreement with International Harvester or any other rival was imminent. The Canadian company's position thus appeared remarkably similar to that of International Harvester, the new chairman of which, Mr Donald Lennox, said in his first interview to an American newspaper last week

that the company was holding discussions with a number of other manufacturers on possible joint ventures.

Speculation about a possible major deal between IH and Massey has been rampant in recent weeks, helping to put the spotlight on the troubled U.S. company's shares on the New York Stock Exchange.

According to Massey, reports of a possible link with IH have largely stemmed from a recent article in an Iowa newspaper suggesting that Massey was interested in acquiring heavy tractors manufactured by IH.

Mr Collins, however, said no such discussions between the two companies had taken place and that Massey is bringing the heavy tractors it manufactures in France to sell in the U.S.

Chairman of Hong Kong trade body



Miss Lydia Dunn, chairman of the Hong Kong Trade Development Council.

Miss Lydia Dunn has been appointed chairman of the HONG KONG TRADE DEVELOPMENT COUNCIL in succession to Sir Y. K. Kan. She takes up the appointment on April 1. Miss Dunn has been

a member of the Hong Kong Legislative Council since 1976 and was appointed to the executive council last year. She is chairman of the special committee on land supply, of the board of the Prince Philip Dental Hospital and treasurer of the Chinese University of Hong Kong.

Miss Dunn is a director of John Swire and Sons (HK), an executive director of Swire Pacific responsible for trading division companies in the Swire Group. She is also a director of the Mass Transit Railway Corporation and of the Hong Kong and Shanghai Bank.

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Mr Charles D. Hoertz Jr has been named president of ASHLAND DEVELOPMENT INC, a subsidiary of Ashland Oil's traditional businesses.

INTERNATIONAL APPOINTMENTS

He was named vice-president of Ashland Synthetic Fuels Inc in 1976 and became its president in 1979. He succeeds Mr David C. Williams, who has retired. Ashland Development is a wholly-owned subsidiary of Ashland Oil Inc.

Mr C.H. Passmore has left the Diagnostics organisation where he was president, international operations, based in the Netherlands to become director of marketing in the KONINKWY ORGANISATION, based in Milan, Italy.

INTERNATIONAL VIDEO CORP has named Mr John A. Sparkman president and chief operating officer, succeeding Mr John F. Frieberg. Mr Sparkman has been a vice-president of IVC since October. Mr Frieberg will continue as a special consultant.

THE STANDARD OIL COMPANY (OHIO) has elected Mr J. H. Meacham vice president, finance and treasurer. Prior to joining Sohio, Meacham had been vice-president and treasurer of InterNorth Inc (formerly Northern Natural Gas Co) since 1978.

Mr Donald E. Gulian has been elected to the board of AMERICAN MEDICAL INTERNATIONAL INC, the California-based company. Mr Gulian has served as chairman of the board

CN reviews its C\$60m investment in Cast

By Robert Gibbons in Montreal

CANADIAN National Railways is conducting key negotiations "with other parties" which could affect its C\$60m (U.S.\$49m) investment in the Swiss-based Cast shipping group which is controlled by Mr Frank Narby. Because of this the Canadian Transport Commission has delayed until April 5 its public hearings on CN's involvement in Cast.

Canadian National Railways has faced constant sniping from Halifax, N.S., which claims Cast has received unfair benefits from the Federally-owned railway.

Cast operates the largest single container operation out of Montreal. It draws its blue hoxes from the Midwest and as far south as St Louis. Because of rising rail haulage costs between Halifax and Montreal, in relation to cost of bringing a container vessel up the St Lawrence, Montreal has been steadily taking container traffic from Halifax.

Motobecane likely to file for bankruptcy

BY DAVID HOUSEGO IN PARIS

MOTOBECANE, the French moped manufacturer, said yesterday that it is likely to file for bankruptcy before the end of the month after failing to meet some FF20m (\$2.92m) of payments due on February 10.

The company, whose mopeds are sold in 80 countries, is still hoping it will be saved by state intervention, further assistance from the banks or by an unnamed benefactor. "We could still be blessed with manna from heaven," an executive said yesterday.

Motobecane ran up losses of over FF20m in 1981 on a turnover of FF1.90m (\$281.7m). Turnover rose to FF2.95m last year, but losses had already reached nearly FF18m by the end of the first half.

The group's immediate difficulties came to light when the chairman, Mr Jean Claude Noblet, resigned earlier this week after the government turned down a restructuring programme that he had put forward requiring a substantial

cash injection and a large number of redundancies. Since his decision there has been speculation that rescue operation might be mounted or that the employees might take over the running of the company, as in the case of Manufrance. Motobecane's difficulties are the result of a slack market and lagging share competition.

Last year Motobecane signed a preliminary production and marketing agreement with Yamaha of Japan to develop mopeds jointly. Shortly afterwards, Mr Marcel Dessault, the aircraft magnate, unexpectedly reduced his holding from 40 to 11 per cent, though the purchaser of his shares remains unknown.

Motobecane produced 224,000 mopeds last year, compared with 217,000 in 1981. It also in each year produced about 470,000 bicycles.

Motobecane said late last week that it would maintain production but that disruptions were possible.

Mr Albright, vice president for Europe, Canada and China, has been acting head of direct credits and financial guarantees since September 1982. As vice president, he will succeed Mr Charles E. Houston, who has retired and will oversee the bank's activities in Asian nations including China.

The Export-Import Bank of the U.S. is an independent agency of the U.S. Government which assists in financing U.S. export sales.

Mr Kendall R. Peek has been elected group vice president, international development of RAYMOND KAISER ENGINEERS INC, a wholly owned subsidiary of Raymond International Inc. He was vice president, business development, of Raymond Kaiser Engineers' heavy industry group, responsible for sales activities in aluminium, steel and power. Other new appointments include Mr William P. Linforth, vice president, domestic business development, and Mr Ricardo E. Canales, president, international business development.

Mr Richard B. Stanger has been appointed director of the PRICE WATERHOUSE federal tax services pension and employee benefit consulting group. Mr Stanger will be responsible for tax consulting related to pension and retirement plans, executive compensation, and employee benefits.

Prior to joining Price Waterhouse, Mr Stanger was a partner in the law firm of Mossman, Krueger and Kne in Washington, DC and Los Angeles. From 1977 to 1980 he was a Legislative Attorney for the United States Congress' Joint Committee on Taxation.

EXPORT-IMPORT BANK OF THE U.S. has elected Mr James R. Sharpe, senior vice president-direct credits and financial services, to succeed Mr Raymond J. Albright as vice president. Both are expected to assume their new duties on February 20. Mr Sharpe, who has been deputy assistant secretary of Commerce for Industry Projects since July 1982, will be responsible for the bank's long-term financing programmes, assisting foreign governments in all parts of the world, for liaison with other U.S. agencies, and for the bank's negotiations with foreign export credit agencies.

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February 8, 1983

U.S. DOLLAR STRAIGHTS										World Bank 95 93				1001 1011 +0.4 -0.4				8.36			
Issued	Bid	Offer	Day	Week	Yield	Change				1004 1004 +0.0 -0.0											
Amex 9/8 Fin. 144 83	75	100 1/10	104 1/4	104 1/4	11.74	0.00				1004 1004 +0.0 -0.0											
Amro Bank 13 85	200	100 1/2	104 1/4	104 1/4	11.73	0.00				1004 1004 +0.0 -0.0											
BUP Finance 144 88	150	100 1/2	104 1/4	104 1/4	11.73	0.00				1004 1004 +0.0 -0.0											
British Col. Hyd. 144 89	200	111 1/2	104 1/4	104 1/4	11.84	0.00				1004 1004 +0.0 -0.0											
British Col. Hyd. 144 92	150	110 1/2	104 1/4	104 1/4	11.84	0.00				1004 1004 +0.0 -0.0											
Canada 144 88	150	111 1/2	104 1/4	104 1/4	11.83	0.00				1004 1004 +0.0 -0.0											
Canada 124 83	175	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Canadian Wheat 144 82	75	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Can. Pac. 144 82	75	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Can. Pac. 144 88	75	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Coca Cola Int. 144 82	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Coca Cola Int. 144 88	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Coca Cola Int. 144 89	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Credit Suisse 144 88	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Credit Suisse 144 89	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 88	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 89	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 90	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 91	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 92	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 93	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 94	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 95	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 96	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 97	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 98	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 99	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 00	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 01	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 02	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 03	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 04	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 05	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 06	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 07	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 08	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 09	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 10	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 11	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 12	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 13	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 14	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 15	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 16	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 17	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 18	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 19	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 20	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 21	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 22	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 23	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 24	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 25	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 26	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 27	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 28	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 29	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 30	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 31	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 32	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 33	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 34	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 35	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 36	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 37	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 38	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 39	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 40	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 41	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 42	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 43	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 44	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 45	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 46	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 47	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 48	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 49	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 50	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 51	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 52	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 53	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 54	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 55	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 56	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 57	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 58	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 59	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 60	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 61	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 62	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 63	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 64	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 65	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 66	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 67	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 68	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen. Elec. 144 69	100	104 1/4	104 1/4	104 1/4	11.53	0.00				1004 1004 +0.0 -0.0											
Gen																					

NEW YORK STOCK EXCHANGE CLOSING PRICES

[illegible]

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Continued on Page 21

Continued on Page 2[illegible]

Continued on Page 22

NEW YORK **Indices**
DOW JONES

Friday	Stocks traded	Closing price	Change in day		Stocks traded	Closing price	Change in day
Ford Motor ...	1,125,300	40 1/2	+ 1/4	Mobil ...	812,600	28 1/2	- 1/4
Eaton ...	580,000	30	+ 1/4	ATT ...	302,300	58 1/2	- 1/4
East. Trust ...	945,700	34 1/2	+ 1/4	IBM ...	791,000	36 1/2	- 1/4
GTE Corp ...	940,200	34	+ 1/4	U.S. Air Corp.	788,700	32 1/2	- 1/4
Std. Oil Calif.	310,200	24 1/2	+ 1/4	Standard Oil Corp.	750,000	25 1/2	+ 2 1/2

WORLD
Capital Intl. (11.178) : — 160.5 158.7 158.0 : 162.6 162.285) (118.4 116.6)

(*) Saturday February 8: Japan Dow 8022.89, TSE 983.97.

8500 values of all indices are 100 except Australia-17 Ordinary and Metals—500, NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; the S&P named based on 1975, including bonds, 4,600 industrials, 4,600 utilities, 1,000 financials, 400 financials and 20 Transperts, c closed

Unavailable.

255	142	CNT Midg.....	195.4				
561	176	U.S.S.B.....	278.3				
316.8	170	Joyako Bank.....	316	26.4	13.4	Nudson Bay Mng.....	21.4
2,205	1,400	Novo Ind.....	2,060	93		Indus's Sals.....	21.4
176	117	Novo Bank.....	176	10.2	4.75	Nuddy Oil.....	21.4
178	11	Pravobankant.....	164.4	34.4		Imco.....	34.4
272	152.4	Bmnd-Hd, FL.....	181.3	32.4	20	masco.....	28.4
512	465	Sophus Berend.....	500	10		Indus.....	16.4
165	94	guserte.....	115	28.1	2.4	Indal.....	16
				15	13.4	Inter. Pipe.....	24.4

160.05	81.85	Mon/Jackson	123	1,040	822 Honda	958
1,640	1,930	Diwerty	2,400	1,130	809 House Food	958
3,405	2,10	Pirali Co	9700	880	809 House Food	958
1,580	1,149	Pirali Sp	1,456	848	921 Itoh IC	1,201
876	380	280 Visa Visa	876	1,190	770 The Volkswa	1,201
20,100	0,900	Toro Asset	18,700	1,180	848 Iwata	958
15,690	0,300	de Pref	9,750	950 JAL	848	958
NORWAY						
				0,420	2,150 JAL	0,350
				714	418 Jusco	958
				278	810 Kalima	958
						958

[illegible]

RATES
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163	158	Varca	178.8	7,400	3,500 Swiss Reinece	7,791
143.9	117	Veba	148.8	1,500	500 Swiss Volkabk	1,957
150.6	99.8	V.E.W.	125	3,330	2,640 Union Bank	3,171
990	263	Verein-West	287	2,780	0,950 Winterthur	2,738
158	123	Volkswagen	158	17,700	13,200 Zurich Ins.	17,700

NOTES:—Prices on this page are as quoted on the individual exchanges and are last traded prices. * Dealings suspended. kd Ex dividend. no Ex scrip issue. at Ex rights. xx Ex oil.

163	158	Varca	178.8	7,400	3,500 Swiss Reinece	7,791
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150.6	99.8	V.E.W.	125	3,330	2,640 Union Bank	3,171
990	263	Verein-West	287	2,780	0,950 Winterthur	2,738
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Figure 1. The effect of the number of trials on the number of correct responses. The number of correct responses was significantly higher than the number of incorrect responses in all cases.

State & Propane Companies									
Sector Funds									
Energy	125.9	34.8	+2.3	1.0					
Energy	122.2	31.9	+1.9	1.0					
Energy Fund (1)	122.2	31.9	+1.9	1.0					
Energy Fund (2)	122.2	31.9	+1.9	1.0					
Energy Fund (3)	122.2	31.9	+1.9	1.0					
Energy Fund (4)	122.2	31.9	+1.9	1.0					
Energy Fund (5)	122.2	31.9	+1.9	1.0					
Energy Fund (6)	122.2	31.9	+1.9	1.0					
Energy Fund (7)	122.2	31.9	+1.9	1.0					
Energy Fund (8)	122.2	31.9	+1.9	1.0					
Energy Fund (9)	122.2	31.9	+1.9	1.0					
Energy Fund (10)	122.2	31.9	+1.9	1.0					
Energy Fund (11)	122.2	31.9	+1.9	1.0					
Energy Fund (12)	122.2	31.9	+1.9	1.0					
Energy Fund (13)	122.2	31.9	+1.9	1.0					
Energy Fund (14)	122.2	31.9	+1.9	1.0					
Energy Fund (15)	122.2	31.9	+1.9	1.0					
Energy Fund (16)	122.2	31.9	+1.9	1.0					
Energy Fund (17)	122.2	31.9	+1.9	1.0					
Energy Fund (18)	122.2	31.9	+1.9	1.0					
Energy Fund (19)	122.2	31.9	+1.9	1.0					
Energy Fund (20)	122.2	31.9	+1.9	1.0					
Energy Fund (21)	122.2	31.9	+1.9	1.0					
Energy Fund (22)	122.2	31.9	+1.9	1.0					
Energy Fund (23)	122.2	31.9	+1.9	1.0					
Energy Fund (24)	122.2	31.9	+1.9	1.0					
Energy Fund (25)	122.2	31.9	+1.9	1.0					
Energy Fund (26)	122.2	31.9	+1.9	1.0					
Energy Fund (27)	122.2	31.9	+1.9	1.0					
Energy Fund (28)	122.2	31.9	+1.9	1.0					
Energy Fund (29)	122.2	31.9	+1.9	1.0					
Energy Fund (30)	122.2	31.9	+1.9	1.0					
Energy Fund (31)	122.2	31.9	+1.9	1.0					
Energy Fund (32)	122.2	31.9	+1.9	1.0					
Energy Fund (33)	122.2	31.9	+1.9	1.0					
Energy Fund (34)	122.2	31.9	+1.9	1.0					
Energy Fund (35)	122.2	31.9	+1.9	1.0					
Energy Fund (36)	122.2	31.9	+1.9	1.0					
Energy Fund (37)	122.2	31.9	+1.9	1.0					
Energy Fund (38)	122.2	31.9	+1.9	1.0					
Energy Fund (39)	122.2	31.9	+1.9	1.0					
Energy Fund (40)	122.2	31.9	+1.9	1.0					
Energy Fund (41)	122.2	31.9	+1.9	1.0					
Energy Fund (42)	122.2	31.9	+1.9	1.0					
Energy Fund (43)	122.2	31.9	+1.9	1.0					
Energy Fund (44)	122.2	31.9	+1.9	1.0					
Energy Fund (45)	122.2	31.9	+1.9	1.0					
Energy Fund (46)	122.2	31.9	+1.9	1.0					
Energy Fund (47)	122.2	31.9	+1.9	1.0					
Energy Fund (48)	122.2	31.9	+1.9	1.0					
Energy Fund (49)	122.2	31.9	+1.9	1.0					
Energy Fund (50)	122.2	31.9	+1.9	1.0					
Energy Fund (51)	122.2	31.9	+1.9	1.0					
Energy Fund (52)	122.2	31.9	+1.9	1.0					
Energy Fund (53)	122.2	31.9	+1.9	1.0					
Energy Fund (54)	122.2	31.9	+1.9	1.0					
Energy Fund (55)	122.2	31.9	+1.9	1.0					
Energy Fund (56)	122.2	31.9	+1.9	1.0					
Energy Fund (57)	122.2	31.9	+1.9	1.0					
Energy Fund (58)	122.2	31.9	+1.9	1.0					
Energy Fund (59)	122.2	31.9	+1.9	1.0					
Energy Fund (60)	122.2	31.9	+1.9	1.0					
Energy Fund (61)	122.2	31.9	+1.9	1.0					
Energy Fund (62)	122.2	31.9	+1.9	1.0					
Energy Fund (63)	122.2	31.9	+1.9	1.0					
Energy Fund (64)	122.2	31.9	+1.9	1.0					
Energy Fund (65)	122.2	31.9	+1.9	1.0					
Energy Fund (66)	122.2	31.9	+1.9	1.0					
Energy Fund (67)	122.2	31.9	+1.9	1.0					
Energy Fund (68)	122.2	31.9	+1.9	1.0					
Energy Fund (69)	122.2	31.9	+1.9	1.0					
Energy Fund (70)	122.2	31.9	+1.9	1.0					
Energy Fund (71)	122.2	31.9	+1.9	1.0					
Energy Fund (72)	122.2	31.9	+1.9	1.0					
Energy Fund (73)	122.2	31.9	+1.9	1.0					
Energy Fund (74)	122.2	31.9	+1.9	1.0					
Energy Fund (75)	122.2	31.9	+1.9	1.0					
Energy Fund (76)	122.2	31.9	+1.9	1.0					
Energy Fund (77)	122.2	31.9	+1.9	1.0					
Energy Fund (78)	122.2	31.9	+1.9	1.0					
Energy Fund (79)	122.2	31.9	+1.9	1.0					
Energy Fund (80)	122.2	31.9	+1.9	1.0					
Energy Fund (81)	122.2	31.9	+1.9	1.0					
Energy Fund (82)	122.2	31.9	+1.9	1.0					
Energy Fund (83)	122.2	31.9	+1.9	1.0					
Energy Fund (84)	122.2	31.9	+1.9	1.0					
Energy Fund (85)	122.2	31.9	+1.9	1.0					
Energy Fund (86)	122.2	31.9	+1.9	1.0					
Energy Fund (87)	122.2	31.9	+1.9	1.0					
Energy Fund (88)	122.2	31.9	+1.9	1.0					
Energy Fund (89)	122.2	31.9	+1.9	1.0					
Energy Fund (90)	122.2	31.9	+1.9	1.0					
Energy Fund (91)	122.2	31.9	+1.9	1.0					
Energy Fund (92)	122.2	31.9	+1.9	1.0					
Energy Fund (93)	122.2	31.9	+1.9	1.0					
Energy Fund (94)	122.2	31.9	+1.9	1.0					
Energy Fund (95)	122.2	31.9	+1.9	1.0					
Energy Fund (96)	122.2	31.9	+1.9	1.0					
Energy Fund (97)	122.2	31.9	+1.9	1.0					
Energy Fund (98)	122.2	31.9	+1.9	1.0					
Energy Fund (99)	122.2	31.9	+1.9	1.0					
Energy Fund (100)	122.2	31.9	+1.9	1.0					

[illegible]

FOOD GROCERIES—Cont.

[illegible]

